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UNITED STATES DEPARTMENT OF AGRICULTURE

BULLETIN No. 673

Contribution from the Forest Service
HENRY S. GRAVES, Forester

Washington, D. C. PROFESSIONAL PAPER April 19, 1918

PRODUCTION OF LUMBER, LATH AND SHINGLES IN 1916

By

FRANKLIN H. SMITH and ALBERT H. PIERSON
STATISTICIANS IN FOREST PRODUCTS

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INTRODUCTION.

In this bulletin, which is one of an annual series covering the period 1904 to 1916, inclusive, with the exception of 1914, are detailed statistics on the 1916 production of lumber, lath, and shingles. A detailed summary of the 1914 lumber production is given in Bulletin 506, which contains the figures for 1915. Preliminary statements issued in April, 1917, summarized the production statistics for 1916. This bulletin details the 1916 data and presents comparative figures from the annual reports for earlier periods.

Note.—Acknowledgment is made for assistance in the compilation and review of this bulletin to R. S. Kellogg, secretary of the National Lumber Manufacturers' Association; A. B. Strough, New York Conservation Commission; and to H. N. Knowlton, Miss Frances R. Waters, Quincy Randles, Miss Maud A. Bell, Asa L. Brower, C. A. Kupfer, H. B. Oakleaf, and C. W. Gould, of the Forest Service.

Compilation of the figures for the Western States was made by the district products offices of the Forest Service at Missoula, Denver, Albuquerque, Ogden, San Francisco, and Portland. Figures for New York State were furnished by the New York Conservation Commission. The work in all of the other States east of the Rocky Mountains was done by the Office of Industrial Investigations of the Forest Service, Washington, D. C.

The entire project was carried on in cooperation with the National Lumber Manufacturers' Association, which not only contributed financially, but, through its affiliated organizations, assisted materially in making the statistics complete.

TOTAL LUMBER PRODUCTION.

The estimated total production of lumber in the United States during 1916 was 40,000,000,000 board feet, or approximately 5 per cent greater than in 1915. The quantity actually reported by 17,269 active mills was 34,791,385,000 board feet.

Production of lumber, particularly the more commonly used building woods, was exceptionally heavy during the spring and early summer, reaching its apex in May. Then followed a severe curtailment, which was carried on into July. From July on production was again increased until a maximum was reached in October, to be followed by the usual decline upon the approach of winter. The output of the sawmills of the country in 1916 was restricted to a considerable degree by an unprecedented shortage of cars, by increased wages and an insufficient supply of labor, and by the largely inflated cost of supplies. Building operations, however, were on a record-creating scale throughout the United States; and this condition was responsible for the heavier production in 1916 than in the previous year, since a proportionately greater quantity of lumber went into domestic consumption than under normal world conditions. Exports of both softwoods and hardwoods were considerably reduced through lack of available tonnage. The production of certain woods was stimulated by world-wide war demands, but on the whole the lumber industry profited little directly by the impetus given many industries in 1916 by the war.

In Table 1 is shown the cut reported each year from 1899 for which data have been compiled, together with the number of active mills reporting. The estimated total cut for each year is also given. The statistics for all of the years are not directly comparable, since the intensiveness of the individual canvass made must be taken into consideration. The enumeration for 1899 and 1909 was practically complete, since the field agents of the Bureau of the Census in carrying on the decennial censuses reached nearly all, if not all, mills.

In other years, as in 1916, the work was conducted almost exclusively by mail. The tabulation shows a reported cut in 1916 almost 4,000,000,000 feet greater than in 1915, but smaller than in any other year since 1908. The estimated cut for 1916 is the smallest for any year shown except 1915.

TABLE 1.—*Quantity of lumber reported, number of active sawmills reporting, and estimated total cut, 1904–1916.*

Year.	Reported cut of lumber.	Number of active mills reporting.	Estimated total cut of lumber.
	Board feet.		*Board feet.*
1899	35,084,166,000	31,833	35,084,166,000
1904 [1]	34,135,139,000	[2] 18,277	43,000,000,000
1905	30,502,961,000	11,666	43,500,000,000
1906	37,550,736,000	22,398	46,000,000,000
1907 [3]	40,256,154,000	28,850	46,000,000,000
1908 [3]	33,224,369,000	31,231	42,000,000,000
1909	44,509,761,000	[4] 46,584	....
1910 [3]	40,018,282,000	[2] 31,934	44,500,000,000
1911 [3]	37,003,207,000	[2] 28,107	43,000,000,000
1912	39,158,414,000	[2] 29,005	45,000,000,000
1913	38,387,009,000	[2] 21,668	44,000,000,000
1914 [1]	37,346,023,000	[2] 27,506	40,500,000,000
1915	31,241,734,000	[2] 16,815	38,000,000,000
1916	34,791,385,000	[2] 17,269	40,000,000,000

[1] Custom mills excluded.
[2] Mills cutting under 50,000 feet excluded.
[3] Including mills which manufacture lath and shingles exclusively (1,500 estimated).
[4] Includes 4,543 mills cutting less than 50,000 feet, and all cooperage, veneer, millwork, box, furniture, and other factories cutting any lumber at all in 1909.

LUMBER PRODUCTION BY CLASSES OF MILLS.

As in previous years, the mills were arbitrarily divided into classes according to the quantity reported cut. These classes are shown in Table 2, with the computed[1] number of mills and production (p. —) and with comparative data for other years.

The figures in Table 2 indicate the relation between the mill classes and production, and this feature is emphasized in figure 1 (p. 4). It is especially significant that 925 mills, or 3.08 per cent of the number computed as operating, cut more than 23,000,000,000 feet, or 58.56 per cent of the computed total production. The smaller mills—21,037 operations—constituting 69.93 per cent of the computed number, cut but 4,027,912,000 feet, or 10.12 per cent of the total output of all the mills.

All of the mills which reported for 1916 have been classified according to production and further arranged by States in Table 3 (p. —). The tabulation well illustrates the extended character of the lumber manufacturing industry and at the same time shows the concentration of large units in a few States in the principal producing regions. For instance, of the mills reporting a cut of 10,000,000 feet or more in the South, 121 were located in Louisiana, 70 in Mississippi, 59 in Texas, 31 in Alabama, and 38 in Arkansas; in the West 126 were in Washington, 62 in Oregon, and 36 in California and Nevada; and the Lake States were represented by 23 in Minnesota, 35 in Michigan, and 49 in Wisconsin.

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[1] "Computed" is used in this bulletin to characterize results which were obtained by an extension of the figures compiled from actual reports, so as to give the totals for approximately all mills, including those from which no reports were received.

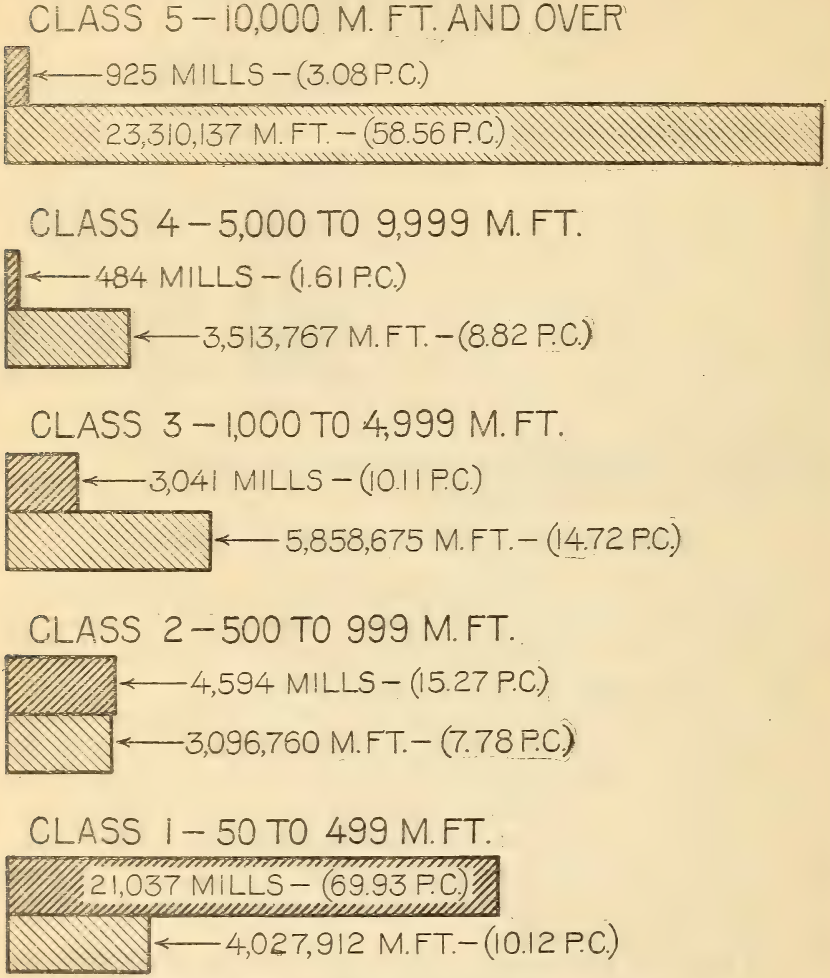

FIG. 1.—Relation between the mill classes and production in 1916.

The character of the timber and the concentration of the supply in the several regions are reflected in the number and size of the mills operating in the different States. Further, it is noticeable that as the timber in the older lumbering regions is depleted the larger operations give way to the smaller outfits. New York, with more than 1,100 mills, has the greatest number of class 1 mills operating and an additional 624 mills cutting less than 50,000 feet of lumber each. North Carolina, Virginia, and Pennsylvania also have a large number of mills which fall into class 1.

Since no vast bodies of unexploited timber remain to be opened up, the relative importance of the producing regions is likely to continue unchanged for several years.

TABLE 2.—*Reported production of lumber 1909, 1912, 1913, 1914, and computed totals 1915 and 1916, by classes of mills.*

Classes.	Mills.			Quantity reported.	
	Year.	Number reporting.	Per cent.	Feet B. M.	Per cent.
All classes	[1] 1909	42,041	100.00	44,384,795,000	100.00
	1912	29,005	100.00	39,158,414,000	100.00
	1913	21,668	100.00	38,387,009,000	100.00
	1914	27,506	100.00	37,346,023,000	100.00
	[2] 1915	29,951	100.00	37,011,656,000	100.00
	[2] 1916	30,081	100.00	39,807,251,000	100.00
Class 5—10,000,000 feet and over per year	1909	888	2.11	19,126,223,000	43.09
	1912	926	3.19	21,259,274,000	54.29
	1913	974	4.50	23,211,667,000	60.47
	1914	867	3.15	20,934,446,000	56.06
	[2] 1915	846	2.82	20,669,746,000	55.84
	[2] 1916	925	3.08	23,310,137,000	58.56
Class 4—5,000,000 to 9,999,000 feet per year	1909	783	1.86	5,291,606,000	11.92
	1912	608	2.10	4,311,063,000	11.01
	1913	740	3.41	4,303,122,000	11.21
	1914	547	1.99	3,910,370,000	10.47
	[2] 1915	453	1.51	3,224,448,000	8.71
	[2] 1916	484	1.61	3,513,767,000	8.82
Class 3—1,000,000 to 4,999,000 feet per year	1909	5,443	12.95	10,068,592,000	22.69
	1912	3,747	12.92	7,009,608,000	17.90
	1913	3,265	15.07	6,319,753,000	16.46
	1914	3,291	11.97	6,078,730,000	16.28
	[2] 1915	3,191	10.65	6,201,864,000	16.76
	[2] 1916	3,041	10.11	5,858,675,000	14.72
Class 2—500,000 to 999,000 feet per year	1909	6,468	15.39	4,315,636,000	9.72
	1912	4,420	15.24	2,951,068,000	7.54
	1913	3,148	14.53	2,049,642,000	5.34
	1914	4,261	15.49	2,780,184,000	7.44
	[2] 1915	4,198	14.02	2,941,264,000	7.95
	[2] 1916	4,594	15.27	3,096,760,000	7.78
Class 1—50,000 to 499,000 feet per year	1909	28,459	67.69	5,582,738,000	12.58
	1912	19,304	66.55	3,627,401,000	9.26
	1913	13,541	62.49	2,502,825,000	6.52
	1914	18,540	67.40	3,642,293,000	9.75
	[2] 1915	21,263	70.99	3,974,334,000	10.74
	[2] 1916	21,037	69.93	4,027,912,000	10.12

[1] The total for 1909 differs from that shown in other tables because 4,543 mills cutting 124,966,000 feet, or less than 50,000 feet each, are omitted above.

[2] The data here shown for both 1915 and 1916 are computed totals by classes of mills.

TABLE 3.—*Sawmills classified according to quantity of lumber cut, by States, 1916.*

	Aggregate.		Class 5.—Mills cutting over 10,000,000 feet.		Class 4.—Mills cutting from 5,000,000 to 9,999,000 feet.		Class 3.—Mills cutting from 1,000,000 to 4,999,000 feet.		Class 2.—Mills cutting from 500,000 to 999,000 feet.		Class 1.—Mills cutting from 50,000 to 499,000 feet.	
	Number of active mills reporting.	Quantity.	Number of mills.	Quantity.	Number of mills.	Quantity.	Number of mills.	Quantity.	Number of mills.	Quantity.	Number of mills.	Quantity.
		Feet b. m.		*Feet b. m.*		*Feet b. m.*		*Feet b. m.*		*Feet b. m.*		*Feet b. m.*
United States	17,269	34,791,385,000	907	23,011,296,000	464	3,365,902,000	2,363	4,575,926,000	2,577	1,736,787,000	10,958	2,101,474,000
Alabama	744	1,310,653,000	31	616,143,000	27	189,165,000	165	365,309,000	102	67,187,000	419	72,849,000
Arizona	17	92,872,000	4	88,870,000					2		11	[1] 4,002,000
Arkansas	706	1,668,493,000	38	1,011,483,000	37	267,958,000	116	238,734,000	106	73,173,000	409	77,145,000
California and Nevada	182	1,413,541,000	36	1,212,969,000	16	115,167,000	20	50,288,000	27	18,352,000	83	16,765,000
Colorado	96	67,368,000			2		20	[2] 51,283,000	7	4,361,000	67	11,724,000
Connecticut	145	60,163,000					17	21,522,000	30	21,648,000	98	16,993,000
Delaware	34	9,356,000							7	3,735,000	27	5,621,000
Florida	225	1,179,717,000	43	860,829,000	22	163,899,000	46	112,760,000	39	26,825,000	75	15,404,000
Georgia	710	753,930,000	13	219,513,000	21	153,446,000	115	208,929,000	139	89,661,000	422	82,381,000
Idaho	190	846,107,000	23	765,611,000	3	21,079,000	15	25,114,000	17	11,925,000	132	22,378,000
Illinois	114	43,731,000			1		7	[3] 22,432,000	8	5,446,000	98	15,853,000
Indiana	471	209,354,000			1		47	[3] 94,921,000	71	48,253,000	352	66,180,000
Iowa	61	18,027,000			1		1		2	[4] 8,720,000	57	9,307,000
Kansas	5	534,000									5	534,000
Kentucky	597	374,074,000	5	77,918,000	9	65,112,000	41	80,884,000	93	61,509,000	449	88,651,000
Louisiana	329	3,910,866,000	121	3,437,419,000	37	277,447,000	64	153,152,000	45	30,846,000	62	12,002,000
Maine	606	866,749,000	15	264,188,000	19	147,194,000	162	308,764,000	115	78,374,000	295	68,229,000
Maryland	213	68,988,000			1		10	[3] 18,736,000	32	20,478,000	170	29,774,000
Massachusetts	260	176,268,000	1				56	[5] 109,758,000	47	34,300,000	156	32,210,000
Michigan	341	1,019,183,000	35	600,235,000	32	233,562,000	47	118,986,000	42	28,952,000	185	37,448,000
Minnesota	211	1,063,046,000	23	958,340,000	6	44,037,000	12	21,800,000	16	11,879,000	154	26,990,000
Mississippi	627	2,353,891,000	70	1,699,709,000	27	197,208,000	166	342,238,000	92	64,218,000	272	50,518,000
Missouri	389	219,244,000	3	35,842,000	5	38,671,000	38	69,063,000	33	22,194,000	310	53,474,000
Montana	103	383,884,000	8	322,430,000	4	30,199,000	8	12,381,000	10	6,229,000	73	12,645,000
New Hampshire	305	336,064,000	1		2	[5] 39,105,000	112	218,206,000	76	54,467,000	114	24,286,000
New Jersey	109	30,925,000					5	6,752,000	14	9,430,000	90	14,743,000
New Mexico	55	80,406,000	3	42,500,000	1		6	[3] 20,811,000	23	12,942,000	22	4,153,000
New York	1,260	349,908,000	3	35,816,000	2		37	[2] 76,338,000	97	66,357,000	1,121	171,352,000
North Carolina	1,532	1,657,032,000	36	608,915,000	32	220,610,000	226	421,028,000	294	193,269,000	944	213,210,000
Ohio	546	219,042,000	1		2	[5] 27,354,000	32	44,972,000	86	57,041,000	425	89,675,000

Oklahoma	91	232,198,000	6	181,786,000	1		11	[3] 31,849,000	10	7,277,000	63	11,286,000
Oregon	525	2,221,854,000	62	1,833,853,000	12	84,676,000	99	182,902,000	91	65,264,000	261	55,159,000
Pennsylvania	934	565,895,000	10	233,696,000	4	29,083,000	51	81,205,000	115	76,335,000	754	145,576,000
Rhode Island	19	17,827,000					11	14,722,000	3	2,325,000	5	780,000
South Carolina	443	746,301,000	18	363,159,000	15	115,572,000	101	191,344,000	51	33,096,000	258	43,130,000
South Dakota	27	26,450,000	1				1		3	[6] 22,906,000	22	3,544,000
Tennessee	768	488,242,000	6	86,969,000	14	96,002,000	60	118,055,000	106	72,031,000	582	115,185,000
Texas	301	1,723,826,000	59	1,451,825,000	15	109,403,000	65	110,125,000	43	27,875,000	119	24,598,000
Utah	76	9,383,000							2		74	[1] 9,383,000
Vermont	335	180,234,000	1		2	[5] 28,775,000	39	60,800,000	62	43,101,000	231	47,558,000
Virginia	1,210	1,036,209,000	21	375,793,000	13	92,654,000	152	236,932,000	259	171,363,000	765	159,467,000
Washington	444	4,492,997,000	126	4,003,669,000	33	232,563,000	87	192,646,000	54	36,614,000	144	27,505,000
West Virginia	475	1,009,156,000	35	608,030,000	26	183,634,000	48	110,378,000	67	46,815,000	299	60,299,000
Wisconsin	386	1,240,778,000	49	925,218,000	19	143,599,000	45	100,212,000	38	24,886,000	235	46,863,000
Wyoming	52	16,619,000					2		1	[7] 9,342,000	49	7,277,000

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[1] Includes the cut of 2 mills in class 2.

[2] Includes the cut of 2 mills in class 4.

[3] Includes the cut of 1 mill in class 4.

[4] Includes the cut of 1 mill each in classes 4 and 3.

[5] Includes the cut of 1 mill in class 5.

[6] Includes the cut of 1 mill each in classes 5 and 3.

[7] Includes the cut of 2 mills in class 3.

CUT AND CAPACITY OF REPORTING MILLS.

For the purpose of determining within a reasonable degree of accuracy the relation of the cut to capacity of the mills of the country, data was asked of the mills as to the quantity of lumber that could be cut if the price and demand were very favorable. More than one-half of the total number of mills which reported furnished figures on capacity, and these figures are compiled in Table 4 below. The computations bear out the generally accepted statement that the larger the plant the nearer to capacity it is operated. The figures themselves show that the class 5 mills reporting ran to approximately 71 per cent of capacity, class 4 mills to 64 per cent, class 3 mills to 50 per cent, class 2 mills to 34 per cent, and class 1 mills to but 17 per cent. The aggregate quantity reported cut by the mills making returns as to capacity was approximately 55 per cent of the capacity of the mills as a whole. It should be taken into consideration that much speculation must necessarily enter into the individual calculation as to quantity of lumber which could be produced economically; and that each case would be modified by varying factors, such as capital, log supply, equipment, labor, markets, and shipping facilities.

TABLE 4.—*Reported cut and capacity of reporting mills.*

	Cut of mills reporting capacity.	Number of mills reporting capacity.	Capacity reported.	Total mills.	Total cut.
	Feet b. m.		*Feet b. m.*		*Feet b. m.*
Total	20,847,608,000	9,566	37,942,157,000	17,269	34,791,385,000
Class 5	14,271,909,000	540	20,052,040,000	907	23,011,296,000
Class 4	1,825,068,000	251	2,868,515,000	464	3,365,902,000
Class 3	2,561,037,000	1,321	5,155,422,000	2,363	4,575,926,000
Class 2	1,006,886,000	1,491	2,969,126,000	2,577	1,736,787,000
Class 1	1,182,708,000	5,963	6,897,054,000	10,958	2,101,474,000

LUMBER PRODUCTION BY STATES.

The growth and decline of lumber production in the several States is traceable in Table 5 (p. 9–11), which details by States for 12 calendar years the total number of active sawmills reporting and the quantity of lumber reported sawed. The accuracy of the 1915 and 1916 figures is comparatively greater for the Western States than for the Eastern States, since the district offices of the Forest Service are in more intimate touch with the mills than it is practicable for the Washington office to be with the larger number of mills east of the Rocky Mountains. More reliable computed figures can also be given for the West.

The tabulation not only permits of a comparison by years for each State, but records the results of events which have served either to retard or accelerate the production of lumber in a State or group of States. For Washington is shown a cut in 1916 that is three times as great as the 1899 cut. Louisiana's mill output has been all but quadrupled in the same period. Many of the other States have increased their production during the last decade, including Mississippi, Oregon, North Carolina, Alabama, and Florida. Conversely, production in 1916 shows a decline from that of 1907 in Texas, Wisconsin, Michigan, Minnesota, Arkansas, Virginia, West Virginia, Maine, and Pennsylvania, though the decline is not so great as might be expected under conditions of continued heavy cutting.

TABLE 5.—*Total number of active sawmills reporting and quantity of lumber reported or computed, by States, 1899–1916.*

	1916 (30,081 mills).[1]	1915 (29,951 mills).[1]	1914 (27,506 mills).[2]	1913 (21,668 mills).
	Feet b. m.	*Feet b. m.*	*Feet b. m.*	*Feet b. m.*
Total	[3] 39,807,251,000	[3] 37,011,656,000	[3] 37,346,023,000	[3] 38,387,009,000
Washington	4,494,000,000	3,950,000,000	3,946,189,000	4,592,053,000
Louisiana	4,200,000,000	3,900,000,000	3,956,434,000	4,161,560,000
Mississippi	2,730,000,000	2,300,000,000	2,280,966,000	2,610,581,000
Oregon	2,222,000,000	1,690,000,000	1,817,875,000	2,098,467,000
North Carolina	2,100,000,000	2,090,000,000	2,227,854,000	1,957,258,000
Texas	2,100,000,000	1,750,000,000	1,554,005,000	2,081,471,000
Arkansas	1,910,000,000	1,800,000,000	1,796,780,000	1,911,647,000
Alabama	1,720,000,000	1,500,000,000	1,494,732,000	1,523,936,000
Wisconsin	1,600,000,000	1,210,000,000	1,391,001,000	1,493,353,000
Florida	1,425,000,000	1,110,000,000	1,073,821,000	1,055,047,000
California	[4] 1,420,000,000	[4] 1,130,000,000	1,303,183,000	1,183,380,000
Virginia	1,335,000,000	1,500,000,000	1,488,070,000	1,273,953,000
Michigan	1,230,000,000	1,100,000,000	1,214,435,000	1,222,983,000
West Virginia	1,220,000,000	1,100,000,000	1,118,480,000	1,249,559,000
Minnesota	1,220,000,000	1,100,000,000	1,312,230,000	1,149,704,000
Georgia	1,000,000,000	1,000,000,000	1,026,191,000	844,284,000
Maine	935,000,000	1,000,000,000	992,594,000	834,673,000
South Carolina	857,000,000	800,000,000	701,540,000	752,184,000
Idaho	849,600,000	777,000,000	763,508,000	652,616,000
Pennsylvania	750,000,000	950,000,000	864,710,000	781,547,000
Tennessee	700,000,000	800,000,000	885,035,000	872,311,000
Kentucky	525,000,000	560,000,000	596,392,000	541,531,000
New York	400,000,000	475,000,000	486,195,000	457,720,000
New Hampshire	385,000,000	500,000,000	482,744,000	309,424,000
Montana	383,900,000	328,000,000	317,842,000	357,974,000
Ohio	280,000,000	400,000,000	286,063,000	414,943,000
Indiana	270,000,000	350,000,000	298,571,000	332,993,000
Missouri	260,000,000	350,000,000	370,571,000	416,608,000
Oklahoma	240,000,000	230,000,000	200,594,000	140,284,000
Massachusetts	210,000,000	250,000,000	143,094,000	224,580,000
Vermont	200,000,000	260,000,000	249,608,000	194,647,000
Arizona	93,270,000	75,915,000	78,667,000	77,363,000
New Mexico	91,600,000	65,787,000	57,167,000	65,818,000
Maryland	90,237,000	165,000,000	162,097,000	140,469,000
Colorado	77,580,000	74,500,000	102,117,000	74,602,000
Connecticut	75,000,000	90,000,000	81,883,000	93,730,000
Illinois	60,000,000	110,000,000	66,227,000	102,902,000
New Jersey	40,000,000	45,000,000	48,748,000	27,248,000
South Dakota	29,650,000	22,562,000	18,744,000	19,103,000
Iowa	20,000,000	35,000,000	11,443,000	21,676,000
Wyoming	18,495,000	17,000,000	11,852,000	12,940,000
Rhode Island	18,000,000	15,000,000	15,902,000	14,984,000
Delaware	12,000,000	25,000,000	25,517,000	18,039,000
Utah	9,385,000	10,892,000	8,680,000	5,403,000
Kansas	534,000	...	...	...
All other States	...	(5)	[6] 15,672,000	[6] 19,461,000

[1] Figures shown are computed totals.
[2] Custom mills excluded.
[3] Mills cutting less than 50,000 feet per year excluded.
[4] Includes cut of 2 mills in Nevada.
[5] Kansas and Nebraska mills reported less than 50,000 feet each, and these States are therefore omitted.
[6] Includes Kansas, Nebraska, and Nevada.

TABLE 5.—*Total number of active sawmills reporting and quantity of lumber reported or computed, by States, 1899–1916*—Continued.

	1912 (29,005 mills).	1911 (28,107 mills).[1]	1910 (31,934 mills).[1]	1909 (46,584 mills).
	Feet b. m.	*Feet b. m.*	*Feet b. m.*	*Feet b. m.*
Total	[2] 39,158,414,000	[2] 37,003,207,000	[2] 40,018,282,000	44,509,761,000
Washington	4,099,775,000	4,064,754,000	4,097,492,000	3,862,916,000
Louisiana	3,876,211,000	3,566,456,000	3,733,900,000	3,551,918,000
Mississippi	2,381,898,000	2,041,615,000	2,122,205,000	2,572,669,000
Oregon	1,916,160,000	1,803,698,000	2,084,633,000	1,898,995,000
North Carolina	2,193,308,000	1,798,724,000	1,824,722,000	2,177,715,000
Texas	1,902,201,000	1,681,080,000	1,884,134,000	2,099,130,000
Arkansas	1,821,811,000	1,777,303,000	1,844,446,000	2,111,300,000
Alabama	1,378,151,000	1,226,212,000	1,465,623,000	1,691,001,000
Wisconsin	1,498,876,000	1,761,986,000	1,891,291,000	2,025,038,000
Florida	1,067,525,000	983,824,000	992,091,000	1,201,734,000
California	1,203,059,000	1,207,561,000	1,254,826,000	1,143,507,000
Virginia	1,569,997,000	1,359,790,000	1,652,192,000	2,101,716,000
Michigan	1,488,827,000	1,466,754,000	1,681,081,000	1,889,724,000
West Virginia	1,318,732,000	1,387,786,000	1,376,737,000	1,472,942,000
Minnesota	1,436,726,000	1,485,015,000	1,457,734,000	1,561,508,000
Georgia	941,291,000	801,611,000	1,041,617,000	1,342,249,000
Maine	882,128,000	828,417,000	860,273,000	1,111,565,000
South Carolina	816,930,000	584,872,000	706,831,000	897,660,000
Idaho	713,575,000	765,670,000	745,984,000	645,800,000
Pennsylvania	992,180,000	1,048,606,000	1,241,199,000	1,462,771,000
Tennessee	932,572,000	914,579,000	1,016,475,000	1,223,849,000
Kentucky	641,296,000	632,415,000	753,556,000	860,712,000
New York	502,351,000	526,283,000	506,074,000	681,440,000
New Hampshire	479,499,000	388,619,000	443,907,000	649,606,000
Montana	272,174,000	228,416,000	319,089,000	308,582,000
Ohio	499,834,000	427,161,000	490,039,000	542,904,000
Indiana	401,017,000	360,613,000	422,963,000	556,418,000
Missouri	422,470,000	418,586,000	501,691,000	660,159,000
Oklahoma	168,806,000	143,869,000	164,663,000	225,730,000
Massachusetts	259,329,000	273,317,000	239,206,000	361,200,000
Vermont	235,983,000	239,254,000	284,815,000	351,571,000
Arizona	76,287,000	73,139,000	72,655,000	62,731,000
New Mexico	82,650,000	83,728,000	83,544,000	91,987,000
Maryland	174,320,000	144,078,000	154,554,000	267,939,000
Colorado	88,451,000	95,908,000	121,398,000	141,710,000
Connecticut	109,251,000	124,661,000	126,463,000	168,371,000
Illinois	122,528,000	96,651,000	113,506,000	170,181,000
New Jersey	34,810,000	28,639,000	36,542,000	61,620,000
South Dakota	20,986,000	13,046,000	16,340,000	31,057,000
Iowa	46,593,000	59,974,000	75,446,000	132,021,000
Wyoming	13,560,000	33,309,000	30,931,000	28,602,000
Rhode Island	14,421,000	9,016,000	14,392,000	25,489,000
Delaware	28,285,000	23,853,000	46,642,000	55,440,000
Utah	9,055,000	10,573,000	11,786,000	12,638,000
Kansas	....	....	....	....
All other States	[3] 22,525,000	[3] 11,786,000	[3] 12,594,000	[3] 15,946,000

[1] Includes also exclusive lath and shingle mills reporting (1,500 estimated).
[2] Mills cutting less than 50,000 feet per year excluded.
[3] Includes Kansas, Nebraska, and Nevada.

TABLE 5.—*Total number of active sawmills reporting and quantity of lumber reported or computed, by States, 1899–1916*—Continued.

	1908 (31,231 mills).[1]	1907 (28,850 mills).[1]	1904 (18,277 mills).[2]	1899 (31,833 mills).
Total	*Feet b. m.* 33,224,369,000	*Feet b. m.* 40,256,154,000	*Feet b. m.* 34,135,139,000	*Feet b. m.* 35,084,166,000
Washington	2,915,928,000	3,777,606,000	2,485,628,000	1,429,032,000
Louisiana	2,722,421,000	2,972,119,000	2,459,327,000	1,115,366,000
Mississippi	1,861,016,000	2,094,485,000	1,727,391,000	1,206,265,000
Oregon	1,468,158,000	1,635,563,000	987,107,000	734,538,000
North Carolina	1,136,796,000	1,622,387,000	1,318,411,000	1,286,638,000
Texas	1,524,008,000	2,229,590,000	1,406,473,000	1,232,404,000
Arkansas	1,656,991,000	1,988,504,000	1,680,536,000	1,623,987,000
Alabama	1,152,079,000	1,224,967,000	1,243,988,000	1,101,386,000
Wisconsin	1,613,315,000	2,003,279,000	2,623,157,000	3,389,166,000
Florida	730,906,000	839,058,000	812,693,000	790,373,000
California	996,115,000	1,345,943,000	1,077,499,000	737,035,000
Virginia	1,198,725,000	1,412,477,000	949,797,000	959,119,000
Michigan	1,478,252,000	1,827,685,000	2,006,670,000	3,018,338,000
West Virginia	1,097,015,000	1,395,979,000	855,889,000	778,051,000
Minnesota	1,286,122,000	1,660,716,000	1,942,248,000	2,342,338,000
Georgia	904,668,000	853,697,000	1,135,910,000	1,311,917,000
Maine	929,350,000	1,103,808,000	863,860,000	784,647,000
South Carolina	560,888,000	649,058,000	609,769,000	466,429,000
Idaho	518,625,000	513,788,000	211,447,000	65,363,000
Pennsylvania	1,203,041,000	1,734,729,000	1,738,972,000	2,333,278,000
Tennessee	790,642,000	894,968,000	775,885,000	950,958,000
Kentucky	658,539,000	912,908,000	586,371,000	774,651,000
New York	781,391,000	848,894,000	581,976,000	878,448,000
New Hampshire	606,760,000	754,023,000	491,591,000	572,447,000
Montana	311,533,000	343,814,000	236,430,000	255,685,000
Ohio	459,259,000	529,087,000	420,905,000	990,497,000
Indiana	411,868,000	504,790,000	563,853,000	1,036,999,000
Missouri	458,938,000	548,774,000	553,940,000	723,754,000
Oklahoma	158,756,000	140,015,000	32,730,000	22,104,000
Massachusetts	384,526,000	364,231,000	262,467,000	344,190,000
Vermont	304,017,000	373,660,000	337,238,000	375,809,000
Arizona	43,287,000	72,134,000	55,601,000	36,182,000
New Mexico	79,439,000	113,204,000	81,113,000	30,880,000
Maryland	168,534,000	213,786,000	166,469,000	183,711,000
Colorado	117,036,000	134,239,000	141,914,000	133,746,000
Connecticut	137,855,000	140,011,000	69,376,000	108,093,000
Illinois	123,319,000	141,317,000	211,545,000	388,469,000
New Jersey	34,930,000	39,942,000	44,058,000	74,118,000
South Dakota	25,859,000	34,841,000	13,705,000	31,704,000
Iowa	97,242,000	144,271,000	281,521,000	352,411,000
Wyoming	18,822,000	17,479,000	7,990,000	16,963,000
Rhode Island	30,528,000	32,855,000	15,398,000	18,528,000
Delaware	41,184,000	50,892,000	30,416,000	35,955,000
Utah	15,059,000	14,690,000	12,630,000	17,548,000
Kansas	....	....	....	....
All other States	10,627,000	[3] 5,891,000	[4] 23,245,000	[4] 24,646,000

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[1] Includes also exclusive lath and shingle mills reporting (1,500 estimated).

[2] Custom mills excluded.

[3] Includes Kansas and Nevada.

[4] Includes Alaska, Kansas, Nebraska, Nevada, and North Dakota in 1899.

TABLE 6.—*Quantity of each kind of lumber reported, 1899–1910, and computed total production in 1915 and 1916.*

Kind of wood.	1916	1915	1914	1913
	Feet b. m.	*Feet b. m.*	*Feet b. m.*	*Feet b. m.*
Total	[1]39,807,251,000	[1]37,011,656,000	37,346,023,000	38,387,009,000
Yellow pine	15,055,000,000	14,700,000,000	14,472,804,000	14,839,363,000
Douglas fir	5,416,000,000	4,431,249,000	4,763,693,000	5,556,096,000
Oak	3,300,000,000	2,970,000,000	3,278,908,000	3,211,718,000
White pine	2,700,000,000	2,700,000,000	2,632,587,000	2,568,636,000
Hemlock	2,350,000,000	2,275,000,000	2,165,728,000	2,319,982,000
Western yellow pine	1,690,000,000	1,293,985,000	1,327,365,000	1,258,528,000
Spruce	1,250,000,000	1,400,000,000	1,245,614,000	1,046,816,000
Cypress	1,000,000,000	1,100,000,000	1,013,013,000	1,097,247,000
Maple	975,000,000	900,000,000	909,743,000	901,487,000
Gum, red and sap	800,000,000	655,000,000	675,380,000	772,514,000
Yellow poplar	560,000,000	464,000,000	519,221,000	620,176,000
Chestnut	535,000,000	490,000,000	540,591,000	505,802,000
Redwood	490,850,000	420,294,000	535,199,000	510,271,000
Larch	455,000,000	375,000,000	358,561,000	395,273,000
Birch	450,000,000	415,000,000	430,667,000	378,739,000
Cedar	410,000,000	420,000,000	499,903,000	358,444,000
Beech	360,000,000	360,000,000	376,464,000	365,501,000
Tupelo	275,000,000	170,000,000	124,480,000	120,420,000
Basswood	275,000,000	260,000,000	264,656,000	257,102,000
Elm	240,000,000	210,000,000	214,294,000	214,532,000
Ash	210,000,000	190,000,000	189,499,000	207,816,000
Cottonwood	200,000,000	180,000,000	195,198,000	208,938,000
White fir	190,000,000	125,048,000	112,627,000	88,109,000
Sugar pine	169,250,000	117,791,000	136,159,000	149,926,000
Hickory	125,000,000	100,000,000	116,113,000	162,980,000
Balsam fir	125,000,000	100,000,000	125,212,000	93,752,000
Walnut	90,000,000	90,000,000	25,573,000	40,565,000
Sycamore	40,000,000	25,000,000	22,773,000	30,804,000
Lodgepole pine	30,800,000	26,486,000	18,374,000	20,196,000
All other kinds	40,351,000	47,893,000	55,624,000	85,366,000

Kind of wood.	1912	1911	1910	1909
	Feet b. m.	*Feet b. m.*	*Feet b. m.*	*Feet b. m.*
Total	39,158,414,000	37,003,207,000	40,018,282,000	44,509,761,000
Yellow pine	14,737,052,000	12,896,706,000	14,143,471,000	16,277,185,000
Douglas fir	5,175,123,000	5,054,243,000	5,203,644,000	4,856,378,000
Oak	3,318,952,000	3,098,444,000	3,522,098,000	4,414,457,000
White pine	3,138,227,000	3,230,584,000	3,352,183,000	3,900,034,000
Hemlock	2,426,554,000	2,555,308,000	2,856,129,000	3,051,399,000
Western yellow pine	1,219,444,000	1,330,700,000	1,562,106,000	1,499,985,000
Spruce	1,238,600,000	1,261,728,000	1,449,912,000	1,748,547,000
Cypress	997,227,000	981,527,000	935,659,000	955,635,000
Maple	1,020,864,000	951,667,000	1,806,637,000	1,106,604,000
Gum, red and sap	694,260,000	582,967,000	610,208,000	706,945,000
Yellow poplar	623,289,000	659,475,000	734,926,000	858,500,000
Chestnut	554,230,000	529,022,000	535,049,000	663,891,000
Redwood	496,796,000	489,768,000	543,493,000	521,630,000
Larch	407,064,000	368,216,000	382,514,000	421,214,000
Birch	388,272,000	432,571,000	420,769,000	452,370,000
Cedar	329,000,000	374,925,000	415,039,000	346,008,000
Beech	435,250,000	403,881,000	437,325,000	511,244,000
Tupelo	122,545,000	98,142,000	92,071,000	96,676,000
Basswood	296,717,000	304,621,000	344,704,000	399,151,000
Elm	262,141,000	236,108,000	265,107,000	347,456,000
Ash	234,548,000	214,398,000	246,035,000	291,209,000
Cottonwood	227,477,000	198,629,000	220,305,000	265,600,000
White fir	122,613,000	124,307,000	132,327,000	89,318,000
Sugar pine	132,416,000	117,987,000	103,165,000	97,191,000
Hickory	278,757,000	240,217,000	272,252,000	333,929,000
Balsam fir	84,261,000	83,375,000	74,580,000	108,702,000
Walnut	43,083,000	38,293,000	36,449,000	46,108,000
Sycamore	49,468,000	42,836,000	45,063,000	56,511,000
Lodgepole pine	22,039,000	33,014,000	26,634,000	23,733,000
All other kinds	82,145,000	69,548,000	68,428,000	62,151,000

[1] Computed total production by kinds of wood.

TABLE 6.—*Quantity of each kind of lumber reported, 1899–1910, and computed total production in 1915 and 1916*—Continued.

Kind of wood.	1908	1907	1904	1899
	Feet b. m.	*Feet b. m.*	*Feet b. m.*	*Feet b. m.*
Total	33,221,369,000	40,256,154,000	[1]34,135,139,000	[1]35,084,166,000
Yellow pine	11,236,372,000	13,215,185,000	11,521,681,000	9,657,676,000
Douglas fir	3,675,114,000	4,748,872,000	2,928,409,000	1,736,507,000
Oak	2,771,511,000	3,718,760,000	2,902,855,000	4,438,027,000
White pine	3,344,921,000	4,192,708,000	5,332,704,000	7,742,391,000
Hemlock	2,530,843,000	3,375,016,000	3,268,787,000	3,420,673,000
Western yellow pine	1,275,550,000	1,527,195,000	1,290,626,000	945,432,000
Spruce	1,411,992,000	1,726,797,000	1,303,886,000	1,448,091,000
Cypress	743,297,000	757,639,000	749,592,000	495,836,000
Maple	874,983,000	939,073,000	587,558,000	633,466,000
Gum, red and sap	589,347,000	689,200,000	523,990,000	285,417,000
Yellow poplar	654,122,000	862,849,000	853,554,000	1,115.242,000
Chestnut	539,341,000	653,239,000	243,537,000	206,688,000
Redwood	404,802,000	569,450,000	519,267,000	360,167,000
Larch	382,466,000	324,509,000	31,784,000	50,619,000
Birch	386,367,000	387,614,000	224,009,000	132,601,000
Cedar	272,764,000	251,002,000	223,035,000	232,978,000
Beech	410,072,000	430,005,000	(2)	(2)
Tupelo	69,170,000	68,842,000	(2)	(2)
Basswood	319,505,000	381,088,000	228,041,000	308,069,000
Elm	273,845,000	260,579,000	258,330,000	456,731,000
Ash	225,367,000	252,040,000	169,178,000	269,120,000
Cottonwood	232,475,000	293,161,000	321,574,000	415,124,000
White fir	98,120,000	146,508,000	(2)	(2)
Sugar pine	99,809,000	115,005,000	(2)	53,558,000
Hickory	197,372,000	203,211,000	106,824,000	96,636,000
Balsam fir	69,956,000	53,339,000	(2)	(2)
Walnut	43,681,000	41,490,000	31,455,000	38,681,000
Sycamore	43,332,000	46,044,000	18,002,000	29,715,000
Lodgepole pine	(2)	(2)	(2)	(2)
All other kinds	47,873,000	27,734,000	496,461,000	514,721,000

[1] Includes lumber cut in Alaska.

(2) Not separately reported.

LUMBER PRODUCTION BY KINDS OF WOOD.

Ready comparison of the cut of the different woods for 12 years, the same period for which the cut is given by States in the preceding table, is made possible in Table 6 (p. 12). The computation indicates an enlarged output each year, with but a few exceptions, for such species as southern yellow pine, Douglas fir, western yellow pine, cypress, maple, red and sap gum, birch, cedar, tupelo, sugar pine, and walnut. On the other hand, the cut has remained practically stationary or declined for such other woods as oak, white pine, hemlock, spruce, yellow poplar, chestnut, beech, basswood, elm, ash, cottonwood, and hickory. Natural laws of supply and demand have but partially governed the cut of different species, since exploitation of some woods has resulted in an increased demand and production, while other woods have suffered through heightened values due to diminished supply and the substitution of less costly species.

Figures 2 and 3 supplement Tables 5 and 6 by showing graphically the computed figures on 1916 lumber production by States and by species, respectively.

LUMBER PRODUCTION BY SPECIES.

The tabulations in the following pages give the cut by species, summarizing by States the number of mills reporting, the quantity of lumber reported cut, the average value per 1,000 feet f. o. b. mill, and the computed total production. The computed figure for total production is given because it is not possible to obtain returns from every sawmill throughout the country through correspondence, particularly where the furnishing of data is purely voluntary. The need of accurate statistics is generally understood by lumbermen, so that

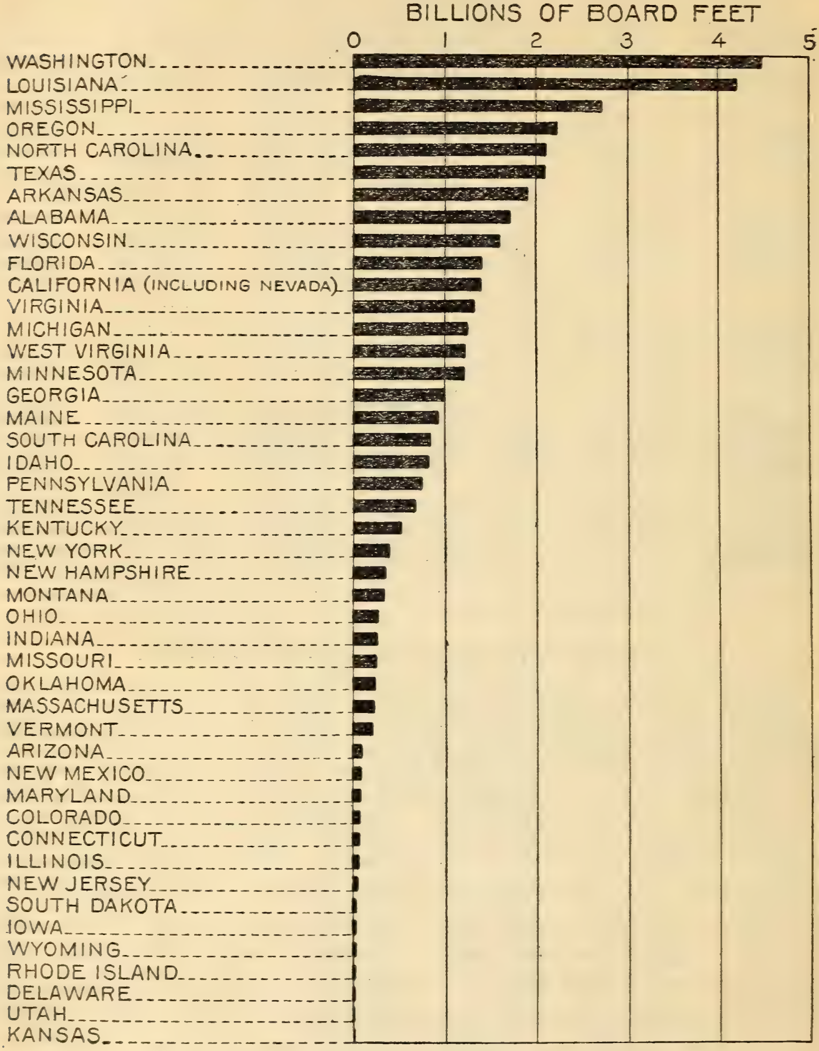

FIG. 2.—Computed total lumber production in 1916 by States.

returns from the larger organizations are almost complete. In making the computations, careful consideration was given to all available data and the figures may be regarded as conservatively correct.

It is not practicable in this bulletin to distinguish the several species which go to make up a given kind of wood, such as yellow pine or oak, because no universal classification exists among the lumbermen. The result is that the several yellow pines are grouped in a single table and the oaks are treated in the same manner.

Not all of the mills which reported their production returned mill values of the lumber, but the figures given are those of more than one-half of the 17,269 mills that scheduled data on their output.

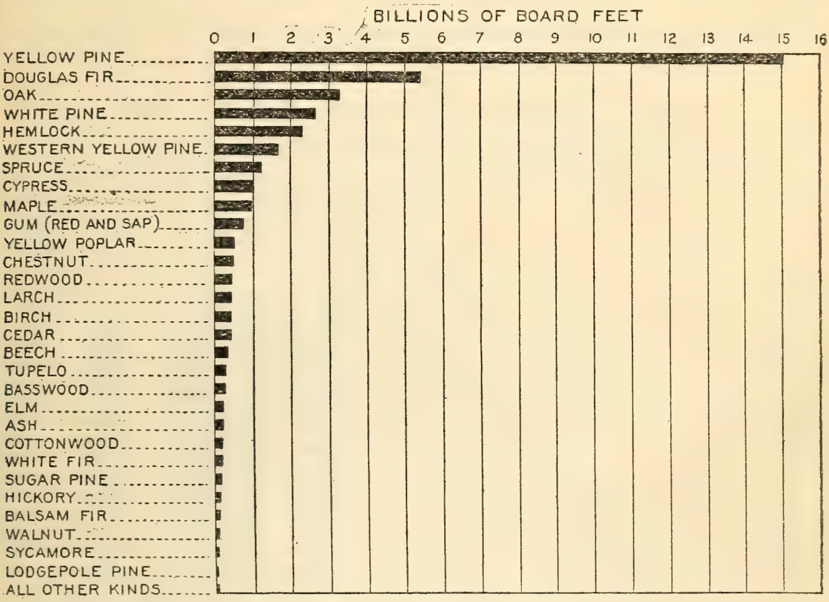

FIG. 3.—Computed total lumber production in 1916 by kinds of wood.

Variations in the prices shown are directly attributable to conditions affecting the mills located within the State, the principal factors being the quantity and quality of the timber cut, proximity to consuming markets, and character of the stock produced. Comparison and analysis of the prices returned on each schedule insured results of considerable accuracy.

YELLOW PINE.

Under the broad classification of yellow pine is included the various yellow pines grown in the eastern and southern sections of the United States. The three species contributing chiefly to the aggregate output are longleaf (*Pinus palustris*), loblolly (*Pinus tæda*), and shortleaf (*Pinus echinata*).

The reported production of yellow pine in 1916 was 13,411,411,000 feet, an increase of 1,234,076,000 feet, or approximately 10 per cent over 1915. Increased production is in evidence in all the States listed with the exception of Arkansas, Missouri, Tennessee, and Kentucky, where decreased output is recorded. The only change in the relative rank as producing States was in the displacement of Arkansas by Alabama in fifth position, due to a greater output in the latter State by approximately 157,000,000 feet without any material difference in production in Arkansas. Reports were received from 6,592 active mills in 1916 as contrasted with 6,006 in 1915.

The computed total production of yellow pine in the United States is nearly 2.5 per cent greater for 1916 than for the preceding year—15,055,000,000 feet as against 14,700,000,000 feet.

There was an advance in the average value from $12.41 per 1,000 feet in 1915 to $14.33 in 1916.

TABLE 7.—*Reported production of yellow pine lumber, 1916.*

(Computed total production in United States, 15,055,000,000 feet b. m.)

	Number of active mills reporting.	Quantity reported.	Per cent.	Average value per M feet, f. o. b. mill.
		Feet b. m.		
United States	6,592	13,411,411,000	100.0	$14.33
Louisiana	236	3,063,468,000	22.9	14.89
Mississippi	497	1,963,285,000	14.6	14.77
Texas	272	1,649,334,000	12.3	15.22
North Carolina	1,322	1,232,849,000	9.2	13.20
Alabama	693	1,180,318,000	8.8	13.06
Arkansas	410	1,075,973,000	8.0	15.26
Florida	214	976,516,000	7.3	13.85
South Carolina	437	643,586,000	4.8	13.67
Virginia	995	632,649,000	4.7	13.96
Georgia	699	621,419,000	4.6	12.96
Oklahoma	48	207,501,000	1.6	13.82
Tennessee	247	42,697,000	.3	13.11
Maryland	125	28,786,000	.2	13.73
Missouri	91	26,851,000	.2	13.21
Kentucky	101	12,633,000	.1	15.01
All other States (see summary, p. 38)	205	53,546,000	.4	....

DOUGLAS FIR.

Douglas fir (*Pseudotsuga taxifolia*), which is the principal commercial species of the Western States and of which more exists in standing timber than any other one species, was produced to the extent of 5,413,431,000 feet, nearly one and one-quarter billion feet (31.33 per cent) more than in 1915. The quantity cut approaches the record of five and one-half billion feet made in 1913. A feature of the 1916 figures is the increase in Oregon over 1915 of more than 100 in the number of active mills and nearly 500,000,000 feet in the cut; the State's proportion of the total quantity cut grew from 27.2 per cent to 29 per cent.

Because of the better facilities for securing data on Douglas fir production, which insured reports from all but a few mills, the computed production figure is only slightly larger than the cut actually reported.

The average value for 1916 is $10.78 per 1,000 feet, an advance of but 19 cents from 1915. The increase in value did not keep pace with the greater output; nor does the sum mentioned approach the advance in the f. o. b. mill value of some competitive woods.

TABLE 8.—*Reported production of Douglas fir lumber, 1916.*

(Computed total production in United States, 5,416,000,000 feet b m.)

	Number of active mills reporting.	Quantity reported.	Per cent.	Average value per M feet, f. o. b. mill.
		Feet b. m.		
United States	1,175	5,413,431,000	100.0	$10.78
Washington	349	3,546,532,000	65.5+	10.85
Oregon	430	1,572,469,000	29.0	10.28
California and Nevada	100	141,200,000	2.6	12.84
Idaho	140	80,632,000	1.5−	11.28
Montana	59	56,845,000	1.1	13.88
All other States (see summary, p. 38)	97	15,753,000	.3	....

OAK.

Oak ranks third in importance in the production of this country's woods, and has a wide distribution. Commercially the oaks are classified as red and white, though there are more than 50 species in the United States. Statistically it is impracticable to do more than show the production of all the oaks together.

The cut of oak is declining, but some of the older producing regions continue to saw annually a surprisingly large quantity. The production figures for 1916 show 2,164,633,000 feet actually reported by 9,400 mills, as compared with 2,070,444,000 feet by 9,517 mills the preceding year. The per cent of increase is 4.5

The production rank of the several States shifted to a considerable extent between 1915 and the succeeding year. West Virginia and Arkansas remained in first and second places, respectively, in 1916; Kentucky succeeded Tennessee in third place; Mississippi moved up from tenth to sixth position, displacing Ohio, whose rank became ninth; and North Carolina took Pennsylvania's position in seventh place. The trend in oak production is further indicated by the increase in cut during 1916 in Virginia, North Carolina, Mississippi, Alabama, and Texas.

The computed cut for 1916 is placed at 3,300,000,000 feet.

There was a substantial increase in the average value, $1.33 per 1,000 feet—from $18.73 in 1915 to $20.06 in 1916.

TABLE 9.—*Reported production of oak lumber, 1916.*

[Computed total production in United States, 3,300,000,000 feet b. m.]

	Number of active mills reporting.	Quantity reported.	Per cent.	Average value per M feet, f. o. b. mill.
		Feet b. m.		
United States	9,400	2,164,633,000	100.0	$20.06
West Virginia	459	298,189,000	13.8	20.96
Arkansas	441	246,264,000	11.4	18.75
Tennessee	729	225,645,000	10.4	21.06
Kentucky	563	212,768,000	9.8	21.21
Virginia	857	184,226,000	8.5	16.21
Mississippi	269	129,131,000	6.0	19.86
North Carolina	841	129,124,000	6 0	16 37
Pennsylvania	750	113,780,000	5.3	21.08
Ohio	513	102,405.000	4.7	26.00
Missouri	357	95,850,000	4.4	17.90
Indiana	431	83,674,000	3.9	29.71
Louisiana	90	71,968,000	3.3	18.79
Alabama	345	41,881,000	1.9	15.57
Texas	100	39,114,000	1.8	17.10
Georgia	229	24,006,000	1.1	17.91
New York	664	23,926,000	1.1	25.13
Illinois	109	20,972,000	1.0	19.91
All other States (see summary, p. 38)	1,653	121,710,000	5.6	....

WHITE PINE.

White-pine data as given here include four species: The white pine (*Pinus strobus*) and Norway or red pine (*Pinus resinosa*) of the Lake States, New England, and Appalachian regions; western white pine (*Pinus monticola*) of the Inland Empire region; and jack pine (*Pinus divaricata*) of the Lake States. To some extent Norway and jack pine are mixed with the lower grades of white pine and sold as the latter, since these species are as well adapted as white pine for the purposes for which it is used.

White-pine production continues without any remarkable change, the reported cut of 2,330,831,000 feet in 1916 being an increase of 1.7 per cent over the 1915 figures of 2,291,480,000 feet. A reference to the tabulation reveals Minnesota's share of the country's reported cut to have been 41.5 per cent, which is an increase of 3.5 per cent over the previous year.

With the exception of the three leading producing States—Minnesota, Idaho, and Maine—and North Carolina, where the quantity cut was almost doubled, the production of the several States listed shows a decline from 1915, slight in nearly all instances, but none the less significant.

No change was made in the computed total production of white pine for 1915, since it is generally conceded that this wood has reached the maximum cut.

The number of mills reporting in 1916 was less by 137 out of a total of 3,212 than the year before.

The average f. o. b. mill value was $19.16 per 1,000 feet, an advance of $1.72 per 1,000 feet.

TABLE 10.—*Reported production of white-pine lumber, 1916.*

[Computed total production in United States, 2,700,000,000 feet b. m.]

	Number of active mills reporting.	Quantity reported.	Per cent.	Average value per M feet, f. o. b. mill.
		Feet b. m.		
United States	3,212	2,330,831,000	100.0	$19.16
Minnesota	154	962,765,000	41.3	18.61
Idaho	36	304,055,000	13.0	19.34
Maine	476	272,035,000	11.7	19.00
Wisconsin	237	187,447,000	8.0	23.30
New Hampshire	272	184,728,000	7.8	17.72
Massachusetts	218	101,567,000	4.4	16.62
Washington	30	64,128,000	2.8	16.62
Michigan	155	64,040,000	2.7	23.17
New York	753	50,145,000	2.2	23.82
North Carolina	126	32,833,000	1.4+	15.54
Pennsylvania	322	31,732,000	1.4−	24.07
Vermont	100	13,924,000	.6	19.03
West Virginia	53	11,619,000	.5−	19.92
Montana	10	10,497,000	.5−	16.40
Connecticut	63	10,283,000	.4	19.64
All other States (see summary, p. 38)	207	29,033,000	1.2	....

HEMLOCK.

Hemlock is cut in both the Eastern and Western States, the principal species being *Tsuga canadensis* and *Tsuga heterophylla* in the respective regions. The wide distribution of the species is indicated by the number of States listed in the tabulation.

TABLE 11.—*Reported production of hemlock lumber, 1916.*

[Computed total production in United States, 2,350,000,000 feet b. m.]

	Number of active mills reporting.	Quantity reported.	Per cent.	Average value per M feet, f. o. b. mill.
		Feet b. m.		
United States	3,538	1,986,653,000	100.0	$15.35
Wisconsin	234	527,465,000	26.6	15.53
Michigan	229	324,720,000	16.3	15.40
Washington	80	267,313,000	13.5−	10.23
Pennsylvania	429	243,810,000	12.3	19.40
West Virginia	133	161,554,000	8.1	17.01
Maine	439	96,300,000	4.8	15.91
New York	1,007	79,880,000	4.0	19.18
Oregon	23	70,014,000	3.5+	10.04
New Hampshire	212	43,165,000	2.2	15.80
North Carolina	77	42,916,000	2.2	14.83
Virginia	73	35,952,000	1.8	14.84
Tennessee	42	25,977,000	1.3	13.32
Vermont	270	25,257,000	1.3−	16.87
Massachusetts	117	15,770,000	.8	17,48
Kentucky	58	15,649,000	.8	15.86
All other States (see summary, p. 38)	115	10,911,000	.5+	....

A decrease of slightly less than 2 per cent in the cut was actually reported in comparison with the 1915 figures—1,986,653,000 feet in 1916 and 2,026,460,000 feet in 1915. Wisconsin produced more than one-fourth of the reported cut of all the States, the figures indicating an increase of 53,000,000 feet over 1915; Michigan's cut decreased 48,000,000 feet for the same period. Hemlock production for the

United States as a whole has been well sustained during the last seven years.

The computed cut was placed at 2,350,000,000 feet, an increase of 75,000,000 feet, or about 3 per cent.

While 3,538 mills reported their cut, this number is 201 less than for the previous report.

The average f. o. b. mill value advanced from $13.14 to $15.35, or $2.21, the largest increases being in the eastern product.

WESTERN YELLOW PINE.

Western yellow pine (*Pinus ponderosa*), which is cut in practically each one of the Western States, gained nearly 35 per cent in reported production in 1916 over the previous year, the figures being 1,684,987,000 feet and 1,252,244,000 feet, respectively. The noteworthy increase is largely accounted for by Oregon's cut being almost twice as great as in 1915. Oregon ranked third in the list of producing States in 1915 and cut approximately 15 per cent of the total quantity of western yellow pine reported for all States; in 1916 this State supplanted Idaho in second place in the list with 24 per cent of the total cut to its credit. With the exception of Colorado, the output in all of the other States was accelerated. The largely increased cut of western yellow pine places that wood in sixth place according to quantity produced for all species, displacing spruce in that position.

The computed total output of 1,690,000,000 feet for the country is an increase of 31 per cent over 1915.

The average value of the lumber f. o. b. mill for 1916 is $14.52; the year before it was $14.32.

TABLE 12.—*Reported production of western yellow pine lumber, 1916.*

[Computed total production in United States, 1,690,000,000 feet b. m.]

	Number of active mills reporting.	Quantity reported.	Per cent.	Average value per M feet, f. o. b. mill.
		Feet b. m.		
United States	787	1,684,987,000	100.0	$14.52
California	133	494,973,000	29.4	15.40
Oregon	163	399,102,000	23.7	13.75
Idaho	118	240,160,000	14.2	14.47
Washington	119	188,215,000	11.2	12.94
Montana	65	138,206,000	8.2	14.76
Arizona	16	92,133,000	5.5	15.80
New Mexico	51	72,004,000	4.3	13.50
Colorado	52	27,848,000	1.6	13.96
South Dakota	25	25,466,000	1.5+	19.05
All other States (see summary, p. 38)	45	6,880,000	.4	....

SPRUCE.

Red spruce (*Picea rubens*) and Sitka spruce (*Picea sitchensis*) form the bulk of the spruce production, the former being manufactured in the New England and Appalachian regions and the latter in Washington and Oregon.

The reported total cut of 1,129,750,000 feet is 5.4 per cent less than in 1915. This decreased output of lumber is in a measure accounted for by the quantity of spruce timber which was cut for pulpwood rather than for saw logs; New Hampshire's output was less by one-half and New York's less by one-quarter than the reported cut of 1915. The two States mentioned furnish much spruce to pulp mills.

The three leading States in the production of spruce—Maine, Washington, and West Virginia—enlarged their cut in 1916; but the increase in these three States was not enough to offset the decrease in the other States. A feature of the tabulation is the position of Oregon in fourth place in importance of production, the State having occupied seventh position in 1915. Oregon's greater cut, as well as that of Washington, is attributed to the heavier demand during the year for spruce airplane stock.

The computed total cut of spruce is given as 1,250,000,000 feet, which is a decrease of 10.7 from the year before.

The average f. o. b. mill value of $17.58 is higher by exactly $1 than the 1915 value.

TABLE 13.—*Reported production of spruce lumber, 1916.*

[Computed total production in United States, 1,250,000,000 feet b. m.]

	Number of active mills reporting.	Quantity reported.	Per cent.	Average value per M feet, f. o. b. mill.
		Feet b. m.		
United States	1,477	1,129,750,000	100.0	$17.58
Maine	357	376,820,000	33.4	19.22
Washington	65	221,295,000	19.6	14.08
West Virginia	19	111,965,000	9.9	20.40
Oregon	23	96,245,000	8.5+	11.96
Vermont	264	66,842,000	5.9	18.96
New Hampshire	127	51,337,000	4.8	19.10
North Carolina	7	45,540,000	4.0	21.37
New York	223	41,551,000	3.7	21.25
Minnesota	72	25,357,000	2.2	17.25
Colorado	42	18,614,000	1.7	16.35
Massachusetts	38	14,638,000	1.3	19.41
California	2	13,871,000	1.2+	14.44
Idaho	22	13,537,000	1.2−	13.42
All other States (see summary, p. 38)	216	29,138,000	2.6	....

CYPRESS.

Cypress (*Taxodium distichum*) production, as reported, reached a total of 945,330,000 feet, or 2 per cent more than the cut of the preceding year.

The output of the mills in Louisiana, North Carolina, and Mississippi was slightly less in 1916 than in 1915. Louisiana, while still the leading State of production, cut but 56 per cent instead of 61 per cent of the total reported cypress cut in all States. Cypress production has been maintained at about the same rate since 1909, the exploitation of timber in recent years in States hitherto little logged tending to make up for the smaller output in the older cypress logging sections. The computed total cut of the country, however, is 1,000,000,000 feet, which is 9 per cent less than for 1915.

The average f. o. b. mill value advanced from $19.85 in 1915 to $20.85 per 1,000 feet in 1916.

TABLE 14.—*Reported production of cypress lumber, 1916.*

[Computed total production in United States, 1,000,000,000 feet b. m.]

	Number of active mills reporting.	Quantity reported.	Per cent.	Average value per M feet, f. o. b. mill.
United States	726	*Feet b. m.* 945,350,000	100.0	$20.85—
Louisiana	97	527,425,000	55.8	21.45
Florida	42	188,799,000	20.0	22.24
Georgia	64	54,305,000	5.8	20.06
South Carolina	38	44,810,000	4.7	17.14
Arkansas	137	36,347,000	3.8	18.02
Missouri	50	25,555,000	2.7+	16.55
North Carolina	90	25,500,000	2.7—	15.65
Mississippi	74	17,417,000	1.8	22.18
All other States (see summary, p. 38)	134	25,172,000	2.7	....

MAPLE.

Hard or sugar maple (*Acer saccharum*) and silver maple (*Acer saccharinum*) are the two species chiefly lumbered in the Northern States, and red maple (*Acer rubrum*) in the Southern States.

The quantity actually reported cut in 1916 was 809,341,000 feet, an increase of 4.9 per cent over the 1915 figures. The cut of maple has remained almost uniform during a period of 10 years. Michigan continues to put out more maple lumber than any other one of the States, the proportion being 45 per cent of the total for the country.

The computed total production was 975,000,000 feet; the previous year it was 900,000,000 feet.

There was an advance in the f. o. b. mill value during the year of $3.03 to an average of $18.24.

TABLE 15.—*Reported production of maple lumber, 1916.*

[Computed total production in United States, 975,000,000 feet b. m.]

	Number of active mills reporting.	Quantity reported.	Per cent.	Average value per M feet, f. o. b. mill.
United States	4,131	*Feet b. m.* 809,341,000	100.0	$18.24
Michigan	271	365,456,000	45.2	18.90
Wisconsin	278	146,480,000	18.1	16.15
West Virginia	208	70,900,000	8.8	19.11
New York	846	50,551,000	6.2	19.90
Pennsylvania	453	43,422,000	5.4	17.44
Ohio	359	25,733,000	3.2	18.46
Indiana	321	19,730,000	2.4	22.31
Vermont	216	18,465,000	2.3	18.22
Virginia	85	10,090,000	1.2	16.91
All other States (see summary, p. 38)	1,094	53,514,000	7.2	....

RED GUM.

Red gum (*Liquidambar styraciflua*), the sapwood of which is also commercially called "sap gum," was reported cut to the amount of 651,879,000 feet. The output was 36.3 per cent greater than that reported for 1915. The increase is partially accounted for by organized exploitation of uses for the wood.

Each one of the leading producing States, with the exception of Tennessee, Missouri, and South Carolina, measurably increased its cut, the output in Arkansas increasing 35.3 per cent, that in Mississippi 49.6 per cent, and that in Louisiana 92 per cent—a combined increase in cut of 145,000,000 feet.

The computed total production was 800,000,000 feet in 1916 and 655,000,000 feet in 1915.

Along with the enlarged cut of gum there was an advance in the average mill value from $12.54 per 1,000 feet in 1915 to $14.64 in 1916.

TABLE 16.—*Reported production of red gum lumber, 1916.*

[Computed total production in United States, 800,000,000 feet b. m.]

	Number of active mills reporting.	Quantity reported.	Per cent.	Average value per M feet, f. o. b. mill.
		Feet b. m.		
United States	1,845	651,879,000	100.0	$14.64
Arkansas	245	207,148,000	31.8	14.14
Mississippi	174	164,949,000	25.3	16.19
Louisiana	77	75,926,000	11.6	14.01
Tennessee	186	23,917,000	3.7	16.27
North Carolina	141	23,647,000	3.6	15.13
Texas	49	23,592,000	3.6	14.75
Alabama	92	22,813,000	—3.5	12.08
Missouri	60	21,951,000	3.4	14.81
South Carolina	43	20,297,000	3.1	13.57
Virginia	111	16,008,000	—2.5	12.50
Georgia	43	12,306,000	1.9	14.80
All other States (see summary, p. 38)	624	39,325,000	6.0	....

YELLOW POPLAR.

Yellow poplar (*Liriodendron tulipifera*) production statistics show a tendency since 1909 toward a restricted output. The cut actually reported in 1916, 394,854,000 feet, was 4.6 per cent greater than for the year previous.

Kentucky dropped in rank as a producing State from second to fourth place, Tennessee and Virginia moving up proportionately. Ohio, once a large source of poplar timber, occupies eighth place as against sixth place in 1915.

The computed cut of 560,000,000 feet was larger than that of 1915 (464,000,000 feet) and that of 1913, but below the reported cut for a series of years.

While practically all other woods show statistically an advance in average mill value for 1916, the poplar figures of $21.89 indicate a slight loss.

TABLE 17.—*Reported production of yellow poplar lumber, 1916.*

[Computed total production in United States, 560,000,000 feet b. m.]

	Number of active mills reporting.	Quantity reported.	Per cent.	Average value per M feet, f. o. b. mill.
		Feet b. m.		
United States	2,906	394,854,000	100.0	$21.89
West Virginia	304	102,515,000	26.0	25.52
Tennessee	394	47,591,000	12.1	22.90
Virginia	365	47,022,000	11.9	20.50
Kentucky	337	40,544,000	10.3	22.13
North Carolina	284	37,272,000	9.4	17.54
Georgia	110	28,569,000	7.2	18.17
Alabama	164	27,265,000	6.9	15.55
Ohio	204	18,494,000	4.7	30.33
South Carolina	73	16,350,000	4.1	16.66
Mississippi	81	10,841,000	2.7	19.59
All other States (see summary, p. 38)	590	18,391,000	4.7	....

CHESTNUT.

Chestnut (*Castanea dentata*) lumber production was partially influenced by the efforts to utilize the timber killed by the chestnut blight. The reported cut of 419,581,000 feet is but 5 per cent more than the quantity reported by the mills in 1915.

Massachusetts operators made the best showing, relatively, in increased output among the individual States. Connecticut and New York also increased their cut over the preceding year.

The computed total production of chestnut for 1916 was 535,000,000 feet.

The average mill value was $17.05; in 1915 it was $16.17.

TABLE 18.—*Reported production of chestnut lumber, 1916.*

[Computed total production in United States, 535,000,000 feet b. m.]

	Number of active mills reporting.	Quantity reported.	Per cent.	Average value per M feet, f. o. b. mill.
		Feet b. m.		
United States	3,197	419,581,000	100.0	+$17.05
West Virginia	331	132,192,000	+31.5	17.39
Pennsylvania	633	51,146,000	12.2	17.45
North Carolina	236	46,497,000	11.1	17.41
Virginia	318	37,270,000	8.9	15.28
Connecticut	143	30,722,000	7.3	18.50
Tennessee	257	26,844,000	6.4	16.10
Massachusetts	129	23,135,000	+5.5	16.69
Kentucky	244	17,416,000	4.1	16.26
New York	438	15,540,000	3.7	17.68
Maryland	89	9,572,000	2.3	14.41
New Jersey	77	8,704,000	2.1	16.53
All other States (see summary, p. 38)	302	20,543,000	4.9	....

REDWOOD.

Redwood (*Sequoia sempervirens*) and bigtree (*Sequoia washingtoniana*), which are without distinction marketed as redwood, are cut exclusively in California, though the range of the former extends into southwest Oregon.

The tabulation shows an increase of two mills in the number reporting and a total cut of 490,828,000 feet, or 17 per cent more than the quantity reported cut in 1915. The figure given is believed to include practically all redwood lumber manufactured.

The average mill value of $13.93 per 1,000 feet was an advance of 39 cents per 1,000 feet over the 1915 value.

TABLE 19.—*Reported production of redwood lumber, 1916.*

[Computed total production in United States, 490,850,000 feet b. m.]

	Number of active mills reporting.	Quantity reported.	Per cent.	Average value per M feet, f. o. b. mill.
		Feet b. m.		
United States	34	490,828,000	100.0	$13.93
California	34	490,828,000	100.0	13.93

LARCH.

Western larch (*Larix occidentalis*) and tamarack (*Larix laricina*) are the two species of larch cut in the Western and Eastern States, respectively, the output reported in 1916 aggregating 376,731,000 feet. This is an increase of 8.1 per cent over the cut of 1915, and is in line with the annual production of the last 10 years.

Montana mills sawed nearly 50,000,000 feet more in 1916 than the year before, bringing up that State's proportion of the total output of the country from 33 to 43 per cent. The cut in both Minnesota and Oregon was less by nearly one-half than in 1915.

The average value f. o. b. mill for 1916 was $12.49, an advance of $1.71 over the value for the previous year.

TABLE 20.—*Reported production of larch lumber, 1916.*

[Computed total production in United States, 455,000,000 feet b. m.]

	Number of active mills reporting.	Quantity reported.	Per cent.	Average value per M feet, f. o. b. mill.
		Feet b. m.		
United States	559	376,731,000	100.0	$12.49
Montana	33	163,829,000	43.4	12.87
Idaho	50	107,827,000	28.6	10.69
Wisconsin	138	32,607,000	8.7	15.81
Washington	46	30,534,000	8.1	9.78
Michigan	113	16,568,000	4.4	15.99
Minnesota	104	15,557,000	4.1	15.53
Oregon	13	8,478,000	2.3	12.00
All other States (see summary, p. 38)	62	1,331,000	.4	....

BIRCH.

Yellow birch (*Betula lutea*) and sweet or cherry birch (*Betula lenta*) are the two species which constitute the bulk of the birch production of the country. The reported cut in 1916 reached a total of 365,943,000 feet, which exceeds the 1915 cut by 3 per cent.

Wisconsin, Michigan, Maine, and New York, the leading States in production, show an increased output. Wisconsin's proportion of the aggregate cut of the country advanced from 46 per cent to 49 per cent.

The computed total cut of 450,000,000 feet is in line with the production of the last three years, during which time much has been done to foster the demand for birch.

The average mill value reached $19.59 per 1,000 feet in 1916; in 1915 it was $16.52.

TABLE 21.—*Reported production of birch lumber, 1916.*

[Computed total production in United States, 450,000,000 feet b. m.]

	Number of active mills.	Quantity reported.	Per cent.	Average value per M feet, f. o. b. mill.
		Feet b. m.		
United States	1,849	365,943,000	100.0	$19.59
Wisconsin	245	179,549,000	49.1	19.51
Michigan	165	59,251,000	16.2	20.75
Maine	191	28,088,000	7.7	19.94
New York	183	23,192,000	6.3+	20.79
Vermont	218	22,980,000	6.3−	19.26
West Virginia	112	16,590,000	4.5+	20.40
New Hampshire	107	10,376,000	2.8	15.25
Minnesota	65	8,341,000	2.3	16.76
Pennsylvania	220	7,839,000	2.1	18.29
All other States (see summary, p. 38)	342	9,737,000	2.7	....

CEDAR.

The term "cedar," as used in this bulletin, embraces several species which make up the bulk of the cut in the respective regions. Western red cedar (*Thuja plicata*) is the species cut in Washington, Oregon, and Idaho; Port Orford cedar (*Chamæcyparis lawsoniana*) in Oregon; northern white cedar, or arborvitæ (*Thuja occidentalis*) in the Lake States and Northeastern States; incense cedar (*Libocedrus decurrens*) in California; southern white cedar, which also is called "juniper," (*Chamæcyparis thyoides*) in Atlantic Coast States; and red cedar (*Juniperus virginiana* and *J. barbadensis*) in Tennessee, Florida, and Alabama.

In rather sharp contrast with the production of other woods, the cedar cut in 1916 of 322,003,000 feet is smaller than the reported cut for 1915. The decline indicated is 8.6 per cent and is directly traceable to the decrease in Washington of 46,000,000 feet in the output and 13 in the number of mills reporting. Washington cut 57 per cent of the total for the entire country in 1915 and but 48 per cent in 1916.

In 1915 Michigan and Wisconsin held seventh and eighth place, respectively, in rank among the producing States; but in 1916 these positions were taken by North Carolina and Tennessee.

The computed total cut for 1916 is given as 410,000,000 feet, which is 10,000,000 feet less than for the preceding year.

Consistent with the decreased cut was the depressed average mill value of $15.24 per 1,000 feet, a drop from $16.10 per 1,000 feet in 1915.

TABLE 22.—*Reported production of cedar lumber, 1916.*

[Computed total production in United States, 410,000,000 feet b. m.]

	Number of active mills reporting.	Quantity reported.	Per cent.	Average value per M feet, f. o. b. mill.
		Feet b. m.		
United States	649	322,003,000	100.0	$15.24
Washington	89	155,532,000	48.3	13.46
Oregon	43	46,138,000	14.3	15.35
Idaho	9	35,981,000	11.2	10.32
Virginia	23	21,230,000	6.6	30.61
California	47	16,587,000	5.1	13.05
Maine	71	9,582,000	3.0	16.88
North Carolina	36	6,883,000	2.1+	18.48
Tennessee	82	6,675,000	2.1−	30.74
Michigan	31	6,369,000	2.0	14.04
Wisconsin	41	5,034,000	1.6	15.39
All other States (see summary, p. 38)	177	11,992,000	3.7	....

BEECH.

Beech (*Fagus atropunicea*) is another one of the hardwoods in which annual statistics show a tapering off in production during the last 10 years. The cut in 1916 was 6.7 per cent less than that in 1915. The total reported output for 1916 was 283,363,000 feet.

The lessened output was apparent in nearly every one of the States listed in the accompanying table, with the exception of Michigan, which cut approximately 330,000 feet more than in 1915, and Indiana, which moved from sixth into third place in production rank.

The average mill value for 1916 was $16.20; in 1915 it was $14.01.

TABLE 23.—*Reported production of beech lumber, 1916.*

[Computed total production in United States, 360,000,000 feet b. m.]

	Number of active mills reporting.	Quantity reported.	Per cent.	Average value per M feet, f. o. b. mill.
		Feet b. m.		
United States	3,162	283,363,000	100.0	$16.20
Michigan	194	66,316,000	23.4	16.50
Pennsylvania	444	38,712,000	13.7	16.75
Indiana	366	37,082,000	13.1	18.53
West Virginia	209	35,634,000	12.6	14.66
New York	552	30,350,000	10.7	17.13
Ohio	378	22,777,000	8.0	16.07
Kentucky	254	17,170,000	6.1	13.10
Vermont	165	9,345,000	3.3	15.88
Tennessee	170	7,411,000	2.6	13.78
New Hampshire	58	5,153,000	1.8	14.04
All other States (see summary, p. 38)	372	13,413,000	4.7	....

TUPELO.

Tupelo statistics, as given in this bulletin, cover production of cotton gum (*Nyssa aquatica*), commercially called tupelo, and black gum, or pepperidge (*Nyssa sylvatica*). Prior to 1915 many of the mills reported their cut of black gum with red gum.

The reported cut of tupelo in 1916 of 214,239,000 feet is 40 per cent more than the quantity reported produced the year before; the increase is correlative with the increase of 36.3 per cent in red gum as previously noted.

A feature of the output for the year is the enlarged cut in Louisiana, which is 81 per cent in excess of the year before, and which advanced the State's production from 41 per cent to 53 per cent of the total for all States. Several other changes occurred in the relative rank of the larger producing States, Alabama assuming second from fourth place in 1915 and North Carolina dropping from second place into fourth.

The computed total production was 275,000,000 feet; it was 170,000,000 feet the preceding year.

The average mill value of $13 per 1,000 feet was an increase of 75 cents per 1,000 feet over the 1915 value.

TABLE 24.—*Reported production of tupelo lumber, 1916.*

[Computed total production in United States, 275,000,000 feet b. m.]

	Number of active mills reporting.	Quantity reported.	Per cent.	Average value per M feet, f. o. b. mill.
		Feet b. m.		
United States	618	214,239,000	100.0	$13.00
Louisiana	50	113,115,000	52.8	13.56
Alabama	43	22,416,000	−10.5	12.43
Virginia	31	21,235,000	9.9	12.41
North Carolina	38	8,338,000	3.9	10.70
Mississippi	43	8,216,000	3.8	12.67
South Carolina	17	7,363,000	3.4	13.46
Missouri	24	6,329,000	3.0	11.65
Tennessee	68	6,083,000	2.8	10.92
Arkansas	56	5,497,000	2.6	12.06
All other States (see summary, p. 38)	248	15,647,000	7.3	....

BASSWOOD.

Basswood, sometimes called linden or linn (*Tilia americana*) is cut mostly in the Lake States, and white basswood (*Tilia heterophylla*) and other species in the Appalachian Mountain region.

The reported cut of 209,275,000 feet in 1916 is less than 1 per cent more than that scheduled for the previous year. The peak in basswood cut statistics was reached in 1909, and since that year the output has gradually diminished.

Wisconsin, Michigan, West Virginia, and New York remain the leading States in production, each having a reported cut of approximately the same quantity as in 1915.

An increase of $2.16 per 1,000 feet in average mill value, which reached $21.05, was recorded for 1916.

TABLE 25.—*Reported production of basswood lumber, 1916.*

[Computed total production in United States, 275,000,000 feet b. m.]

	Number of active mills reporting.	Quantity reported.	Per cent.	Average value per M feet, f. o. b. mill.
		Feet b. m.		
United States	2,668	209,275,000	100.0	$21.05+
Wisconsin	269	72,618,000	34.7	21.15
Michigan	217	36,756,000	17.6	22.07
West Virginia	187	28,955,000	13.8	20.82
New York	708	14,630,000	7.0	22.98
Virginia	57	7,030,000	3.4	21.18
North Carolina	87	7,028,000	3.3	19.83
Minnesota	66	5,985,000	2.9	17.15
Vermont	163	5,868,000	2.8	19.27
Tennessee	59	5,107,000	2.4	19.76
Ohio	174	5,049,000	2.4	22.07
All other States (see summary, p. 38)	681	20,249,000	9.7	....

ELM.

Elm is commercially classified as soft elm and rock elm. White or American elm (*Ulmus americana*) and slippery or red elm (*Ulmus pubescens*) are generally sold as soft elm. Cork elm (*Ulmus racemosa*) is the real rock elm and distinguished as such by the lumber trade.

The production reported in 1916 totaled 195,266,000 feet, which s an increase of 9.8 per cent over the preceding year's cut. Production for the last few years has remained almost stationary.

Wisconsin and Michigan enlarged their output slightly in 1916, and their combined cut amounted to nearly one-half of the production for the entire country.

The computed cut was 240,000,000 feet.

The average mill value was $19.46 per 1,000 feet.

TABLE 26.—*Reported production of elm lumber, 1916.*

[Computed total production in United States, 240,000,000 feet b. m.]

	Number of active mills reporting.	Quantity reported.	Per cent.	Average value per M feet, f. o. b. mill.
		Feet b. m.		
United States	2,681	195,266,000	100.0	$19.46
Wisconsin	265	51,946,000	26.6	19.27
Michigan	226	42,479,000	21.8	22.15
Indiana	301	19,039,000	9.7	21.50
Arkansas	93	17,948,000	9.2	17.74
Ohio	278	10,681,000	5.5−	19.67
Missouri	121	9,836,000	5.0	15.92
New York	487	8,353,000	4.3	19.10
Tennessee	129	8,230,000	4.2	18.29
Mississippi	66	7,161,000	3.7	18.34
All other States (see summary, p. 38)	715	19,593,000	10.0	....

ASH.

Ash production is largely of three species—white ash (*Fraxinus americana*), black ash (*Fraxinus nigra*), and green ash (*Fraxinus lanceolata*)—though trade customs characterize the species as white ash and brown ash, the latter being the black ash. The white ash is found largely in the central hardwood region, the New England States, and the Lake States. Black ash is cut in the Lake States. The Southern States provide the green ash.

The older settled States are being displaced as the principal sources of supply for ash, Arkansas and Louisiana now ranking first and second, respectively, with Ohio, Indiana, and Michigan taking lesser rank.

The reported cut in 1916 was 156,204,000 feet. This quantity is 2.3 per cent less than the 1915 reported cut.

The computed cut of 210,000,000 feet indicates but a small reduction from the output of the country during the last five years.

The average mill value of ash in 1916 was $23.85.

TABLE 27.—*Reported production of ash lumber, 1916.*

[Computed total production in United States, 210,000,000 feet b. m.]

	Number of active mills reporting.	Quantity reported.	Per cent.	Average value per M feet, f. o. b. mill.
		Feet b. m.		
United States	3,493	156,204,000	100.0	$23.85–
Arkansas	107	23,117,000	14.8	22.43
Louisiana	57	16,175,000	10.4	23.50
Wisconsin	210	13,621,000	8.7	21.46
Tennessee	180	12,020,000	7.7	25.90
Mississippi	86	8,524,000	5.5–	24.97
Indiana	237	8,190,000	5.2	31.07
West Virginia	128	7,710,000	4.9	25.57
Ohio	292	7,476,000	4.8	31.12
New York	647	7,359,000	4.7+	25.10
Michigan	180	7,273,000	4.7–	22.53
All other States (see summary, p. 38)	1,369	44,739,000	28.6	....

COTTONWOOD.

Cottonwood, produced largely in the lower Mississippi Valley States, is of several related species. The greater portion of the cut is the common cottonwood (*Populus deltoides*).

Of the reported cut of 134,980,000 feet in 1916 nearly two-thirds was sawed by mills in Mississippi, Arkansas, and Louisiana. Statistics show the output of cottonwood has dwindled during the last 10 years. Between 1915 and 1916 the decrease was 2.4 per cent.

The average mill value of $17.42 is but a few cents higher than the value established for the year previous.

TABLE 28.—*Reported production of cottonwood lumber, 1916.*

[Computed total production in United States, 200,000,000 feet b. m.]

	Number of active mills reporting.	Quantity reported.	Per cent.	Average value per M feet, f. o. b. mill.
		Feet b. m.		
United States	928	134,980,000	100.0	$17.42
Mississippi	42	35,398,000	26.2	19.65
Arkansas	49	27,524,000	20.4	16.87
Louisiana	33	18,405,000	13.6	18.79
Minnesota	74	11,863,000	8.8	13.29
Missouri	54	5,331,000	4.0	20.11
Alabama	24	4,095,000	3.0	15.28
Tennessee	28	3,699,000	2.8	18.74
Michigan	37	2,834,000	2.1	13.82
Iowa	42	2,566,000	1.9	20.37
All other States (see summary, p. 38)	537	23,265,000	17.2	....

WHITE FIR.

White fir (*Abies concolor*) statistics as given in this bulletin include several other species which are marketed as white fir, including grand fir (*Abies grandis*), silver fir (*Abies amabilis*), noble fir, sometimes erroneously called larch, red fir (*Abies magnifica*), and alpine fir (*Abies lasiocarpa*).

The somewhat remarkable increase of 56 per cent occurred in the 1916 over the 1915 reported production, the figures being 189,699,000 feet and 121,653,000 feet, respectively. The greater output was general, since the California and Nevada cut as well as that of Oregon was one-third larger. Idaho's cut increased by nearly one-half, while Washington's output was almost three times as much as that reported in 1915. The explanation of the bigger cut is in the fact that with the general increase in lumber prices, white fir sold at a price above the cost of production. Higher values resulted in white fir being logged with other species instead of being left in the woods.

The average mill value of $12.25 is next to the lowest value scheduled for any species.

TABLE 29.—*Reported production of white fir lumber, 1916.*

[Computed total production in United States, 190,000,000 feet b. m.]

	Number of active mills reporting.	Quantity reported.	Per cent.	Average value per M feet, f. o. b. mill.
		Feet b. m.		
United States	231	189,699,000	100.0	$12.25+
California and Nevada	64	85,918,000	45.3	13.06
Idaho	45	60,344,000	31.8	12.14
Oregon	47	20,451,000	10.8	10.10
Washington	34	18,042,000	9.5	10.75
Montana	5	3,408,000	1.8	13.77
All other States (see summary, p. 38)	36	1,536,000	.8	....

SUGAR PINE.

Sugar pine (*Pinus lambertiana*) production in 1916 was the largest for any one year for which data are recorded. It totaled 169,247,000 feet, an increase in itself of 47 per cent over the quantity reported cut in 1915. The figures are those for 65 mills, in comparison with 42 mills which reported in 1915. To the larger number of operations may be attributed the greater proportion of the much swelled output, though apparently the mills found it expedient to enlarge their cut.

The average mill value of $16.77 per 1,000 feet is slightly under the 1915 value.

TABLE 30.—*Reported production of sugar pine lumber, 1916.*

[Computed total production in United States, 169,250,000 feet b. m.]

	Number of active mills reporting.	Quantity reported.	Per cent.	Average value per M feet, f. o. b. mill.
		Feet b. m.		
United States	65	169,247,000	100.0	$16.77
California	54	165,461,000	97.8	16.87
Oregon	11	3,786,000	2.2	12.53

HICKORY.

Hickory lumber production in 1915 showed little change from that reported for the two years preceding. The 1916 reported cut of 93,454,000 feet is 8.6 per cent in excess of the cut of the year before. Five species are cut in the main—shagbark (*Hicoria ovata*), shellbark (*Hicoria laciniosa*), pignut (*Hicoria glabra*), bitternut (*Hicoria minima*), and mockernut (*Hicoria alba*). The quantity of hickory cut into lumber or plank has substantially decreased in the last few years, since the principal consumers want the material cut into dimension stock; it is also generally realized that the supply of hickory timber is diminishing.

The average value of hickory as reported by the mills was $23.84 per 1,000 feet; in 1915 it was $23.35.

TABLE 31.—*Reported production of hickory lumber, 1916.*

[Computed total production in United States, 125,000,000 feet b. m.]

	Number of active mills reporting.	Quantity reported.	Per cent.	Average value per M feet, f. o. b. mill.
		Feet b. m.		
United States	2,500	93,454,000	100.0	$23.84
Arkansas	135	13,311,000	14.2	25.39
Tennessee	217	12,013,000	12.9	25.08
West Virginia	209	9,909,000	10.6	20.41
Kentucky	179	9,788,000	10.5–	20.03
Indiana	276	7,639,000	8.2	28.84
Mississippi	68	6,700,000	7.2	29.01
Ohio	322	6,575,000	7.0	26.43
Louisiana	31	4,370,000	4.7	20.06
Missouri	93	4,063,000	4.3	29.11
Pennsylvania	228	3,310,000	3.5+	21.30
All other States (see summary, p. 38)	742	15,776,000	16.9	....

BALSAM FIR.

The production of balsam fir (*Abies balsamea*), also known simply as balsam, was increased 36 per cent in 1916 in comparison with the reported cut for the year before. The total cut reported was 97,165,000 feet.

The computed cut of 125,000,000 feet marks an almost unbroken advance in the production of this species, which was regarded as of little worth when other woods were more abundant.

The average mill value of $16.49 per 1,000 feet is an increase of $2.70 over the year previous.

TABLE 32.—*Reported production of balsam fir lumber, 1916.*

[Computed total production in United States, 125,000,000 feet b. m.]

	Number of active mills reporting.	Quantity reported.	Per cent.	Average value per M feet, f. o. b. mill.
		Feet b. m.		
United States	578	97,165,000	100.0	$16.49
Maine	241	53,781,000	55.4	17.05
Minnesota	70	16,320,000	16.7	14.19
Michigan	47	10,373,000	10.7	16.60
Vermont	103	8,042,000	8.3	17.49
New Hampshire	32	4,854,000	5.0	16.73
Wisconsin	40	1,726,000	1.8	16.37
Massachusetts	8	1,293,000	1.3	14.50
All other States (see summary, p. 38)	37	776,000	.8	....

WALNUT.

Walnut (*Juglans nigra*) production was stimulated in 1916 nearly as much as it was the year before to meet the continued exceptionally heavy demand for gunstock material, but the cut reported fell short by 6 per cent of the 1915 figures. The reported output was 61,167,000 feet and the computed cut 90,000,000 feet. With the exception of Kentucky and Iowa, the States listed in the tabulation reported a decreased cut in comparison with the output of the year before, which would confirm the belief generally shared by lumbermen that heavy inroads have been made upon the available supply of the common black walnut.

TABLE 33.—*Reported production of walnut lumber, 1916.*

[Computed total production in United States, 90,000,000 feet b. m.]

	Number of active mills reporting.	Quantity reported.	Per cent.	Average value per M feet, f. o. b. mill.
		Feet b. m.		
United States	1,204	61,167,000	100.0	$42.38
Missouri	73	12,140,000	19.8	46.33
Indiana	203	10,691,000	17.4	43.95
Tennessee	144	8,658,000	14.2	36.87
Kentucky	153	8,138,000	13.3	37.18
Iowa	32	6,497,000	10.6	57.26
Ohio	160	6,026,000	9.9	40.63
Illinois	20	3,169,000	5.2	44.46
West Virginia	96	2,253,000	3.7	34.68
Virginia	54	1,334,000	2.2	23.66
All other States (see summary, p. 38)	269	2,261,000	3.7	....

The average mill value dropped from $48.47 per 1,000 feet in 1915 to $42.38 in 1916.

SYCAMORE.

Sycamore (*Platanus occidentalis*) is produced chiefly in the Mississippi Valley region. In 1916 the total cut was 28,035,000 feet, an increase of 4.2 per cent over 1915. The computed production is given as 40,000,000 feet, since much is sawed by the very small mills and finds utilization on the farms.

The average mill value was $14.65 per 1,000 feet; in 1915 it was $13.86.

TABLE 34.—*Reported production of sycamore lumber, 1916.*

[Computed total production in United States, 40,000,000 feet b. m.]

	Number of active mills reporting.	Quantity reported.	Per cent.	Average value per M feet, f. o. b. mill.
		Feet b. m.		
United States	931	28,035,000	100.0	$14.65
Arkansas	55	7,231,000	25.8	12.73
Indiana	204	3,958,000	14.15	18.15
Tennessee	74	3,680,000	13.2	12.51
West Virginia	32	2,360,000	8.4	17.15
Kentucky	107	1,933,000	6.9	14.48
Ohio	111	1,827,000	6.5—	18.53
Missouri	95	1,789,000	6.4	14.10
Illinois	48	1,297,000	4.6	14.22
All other States (see summary, p. 38)	205	3,960,000	14.1	....

LODGEPOLE PINE.

Lodgepole pine (*Pinus contorta*) is one of the woods for which additional use is being found each year and the production of which shows an annual increase. Even a greater quantity is cut into mine props, ties, poles, and other rough products than is manufactured into lumber. The reported cut increased 24.5 per cent in 1916 over 1915, reaching a total of 28,226,000 feet.

The average mill value advanced from $13.57 per 1,000 feet in 1915 to $15.13 in 1916.

TABLE 35.—*Reported production of lodgepole pine lumber, 1916.*

[Computed total production in United States, 30,800,000 feet b. m.]

	Number of active mills reporting.	Quantity reported.	Per cent.	Average value per M feet, f. o. b. mill.
		Feet b. m.		
United States	102	28,226,000	100.0	$15.13
Colorado	18	14,466,000	51.2	15.06
Wyoming	28	9,114,000	32.3	15.05
Idaho	25	2,097,000	7.4	16.13
Montana	17	1,631,000	5.8	14.07
Utah	14	918,000	3.3	16.77

MINOR SPECIES.

The production figures of a number of woods, both native and foreign, which are not of sufficient importance to tabulate and discuss separately, are given in Table 36. The foreign woods, such as mahogany, Spanish cedar, and Japanese oak, reach the United States largely in the form of round or squared logs. Not infrequently, some of the native species listed are mixed with and sold by sawmill operators as more commonly recognized woods, though several of the minor species have special uses, for which a ready demand exists.

TABLE 36.—*Minor species, 1916.*

[Computed total production in United States, 40,351,000 feet b. m.]

Kind of wood.	Quantity reported.	Average value per M feet, f. o. b. mill.	States reporting.
	Feet b. m.		
Total	32,879,000	$57.29	
Mahogany	13,244,000	107.47	La., Cal.
Cherry	7,872,000	28.34	W. Va., Pa., N. Y., N. C., Tenn., Mich., Ind., Ohio, Va., Mass., Ky., Wis., Conn., N. H.
Buckeye	3,161,000	15.44	W. Va., Tenn., N. C., Va., Ky., Ala., Ohio.
Cucumber	1,900,000	21.08	W. Va., Pa., N. Y., Ohio.
Willow	1,610,000	13.76	La., Miss., Pa., N. Y., Ky., Ark., Tenn.
Magnolia	1,359,000	14.41	Tex., La., Miss., Ala., Ga., S. C.
Locust	712,000	19.29	Pa., Ark., W. Va., N. C., Ill., La., Va., Ind., N. Y., Ky.
Japanese oak	553,000	62.00	Cal.
Eucalyptus	500,000	30.00	Cal.
Butternut	495,000	20.62	W. Va., N. Y., Ind., Mass., Wis., N. C., Ohio, Vt., Va., Iowa, Pa., Tenn., Mich.
Hackberry	421,000	15.30	Ark., La., Mo., Ind., Ohio, Ala., Tenn., Ga., Ill.
Laurel	300,000	40.00	Cal.
Pecan	140,000	14.96	Ark., La.
Persimmon	123,000	20.66	Miss., S. C., Ga., Ill., Ark.
Alder	119,000	12.55	Wash., Oreg., Cal.
Myrtle	81,000	[1] 12.00	Oreg.
Red bay	81,000	12.09	Ga.
Japanese birch	69,000	[1] 50.00	Cal.
Boxelder	64,000	[1] 12.00	N. C., Ill.
Holly	35,000	19.34	Ala., La., Tenn.
Jenisero	18,000	80.00	Cal.
Sassafras	13,000	21.46	Tenn., S. C.
Hornbeam	6,000	25.00	N. H.
Mulberry	3,000	23.33	Ga.

[1] Arbitrary value assigned.

LATH.

Lath production in 1916 increased 15 per cent over that of 1915, 1,770 mills reporting a cut of 3,163,029,000 pieces. The enlarged output may be ascribed mainly to the 22 per cent increase in the value of building operations of the country in 1916 over the year before, which indicates a larger consumption of building materials, and to the higher cost of substitutes for lath, which led to a return to the more commonly used product of the sawmill. There was substantial enlargement of lath production in Maine, Michigan, Wisconsin, Oregon, and Idaho. The production in detail is given in Table 37.

The making of lath as a by-product of the larger operation is indicative of the closer utilization of timber.

TABLE 37.—*Reported production of lath, 1916, 1915, and 1912.*

	Number of active mills reporting.			Quantity reported (feet b. m.).		
	1916	1915	1912	1916	1915	1912
United States	1,770	1,689	2,586	3,163,029,000	2,745,134,000	2,719,163,000
Maine	139	122	172	396,935,000	172,346,000	210,023,000
Louisiana	69	66	65	354,551,000	418,554,000	330,474,000
Michigan	80	74	135	335,846,000	124,543,000	173,415,000
Minnesota	53	54	74	267,788,000	230,686,000	269,095,000
Washington	64	71	69	264,690,000	389,995,000	336,538,000
Wisconsin	121	116	192	218,598,000	179,193,000	257,657,000
Mississippi	30	29	22	162,689,000	123,011,000	81,315,000
Oregon	46	28	32	142,352,000	95,801,000	131,734,000
Idaho	24	29	20	117,365,000	85,672,000	50,895,000
West Virginia	80	70	121	96,665,000	82,561,000	159,119,000
North Carolina	111	106	116	86,551,000	96,474,000	94,086,000
Florida	28	23	26	85,187,000	89,860,000	51,078,000
Arkansas	30	48	43	78,157,000	97,185,000	90,216,000
All other States (see summary p. 38)	895	853	1,499	555,655,000	559,253,000	483,518,000

SHINGLES.

Table 38 shows the production of shingles, by States, in 1916, and for comparative purposes the quantity reported in 1915 and 1912. Shingle output statistics were not secured for either 1913 or 1914. The production of 9,477,077,000 shingles in 1916, while 12 per cent more than the output of the year before, is considerably below the production of 1912 and the immediately preceding years, in which the cut exceeded 12,000,000,000 annually. The number of active mills given in the tabulation as reporting—1,939—probably does not include all the plants making shingles, since many shingle mills are small and impermanent in character. Only a systematic county canvass in each State could secure an approximately correct enumeration. However, Washington produced 71 per cent of the total cut reported in 1916; and this and other important producing States in the West were covered intensively by the district offices of the Forest Service, so the production figures are believed to approach closely the actual output.

TABLE 38.—*Reported production of shingles, 1916, 1915, and 1912.*

	Number of active mills reporting.			Quantity reported (feet b. m.)		
	1916	1915	1912	1916	1915	1912
United States	1,932	1,648	3,615	9,477,077,000	8,459,378,000	12,037,685,000
Washington	238	239	387	6,739,388,000	6,313,335,000	7,996,251,000
Oregon	50	48	66	471,672,000	336,652,000	271,205,000
Louisiana	53	45	51	404,263,000	385,610,000	718,026,000
California	52	25	61	346,622,000	200,755,000	471,592,000
Maine	200	187	277	221,059,000	268,004,000	393,772,000
Michigan	69	63	159	201,171,000	250,640,000	459,359,000
Alabama	113	82	184	183,662,000	67,629,000	126,205,000
Wisconsin	73	77	159	175,455,000	122,882,000	267,945,000
Florida	51	31	76	131,795,000	116,054,000	309,081,000
Georgia	148	111	240	131,763,000	69,308,000	216,688,000
North Carolina	135	125	303	123,959,000	74,773,000	196,943,000
Idaho	9	11	8	79,960,000	49,512,000	37,641,000
Arkansas	42	31	78	45,411,000	20,501,000	114,458,000
Virginia	61	50	240	43,387,000	49,758,000	27,752,000
All other States (see summary, page 38)	638	523	1,326	175,440,000	133,965,000	430,767,000

LUMBER VALUES.

The compilation of average lumber values by species emphasizes a number of differences, such as might be expected to exist, between large and small mills, efficient and inefficient equipment and management, good and poor timber, proximity to and distance from important markets, and other factors which go to make up the individual operation. Not all of the mills which reported their cut for 1916 included average prices, but approximately 50 per cent of the reporting operators provided information used as the basis for Table 39. Mills operating under every condition in every section of each State contributed the figures from which the average for each species was determined, so that the figures can not be literally applied to the value of the product of a particular mill.

It is worthy of note that the average value of all species for 1916 is $15.32 per 1,000 feet, whereas it was $14.04 in 1915. Each one of the softwoods listed, with the exception of cedar and sugar pine, shows an increase in value over that of the year before, with which the 1916 figure is directly comparable. The same generally higher range of values applies to the hardwoods, among which the recessions are also limited to two—yellow poplar and walnut. While certain variations may appear to the lumberman as contrary to the figures of any one operation in which he may be interested, the values given are unquestionably typical.

TABLE 39.—*Average value of lumber per thousand feet, b. m., by kinds of wood, for specified years, 1899 to 1916.*

Kind of wood.	1916	1915	1912[1]	1911	1910	1909	1907	1904	1899
All kinds	$15.32	$14.04	$15.35	$15.05	$15.30	$15.38	$16.56	$12.76	$11.13
Softwoods:									
Yellow pine	14.33	12.41	14.36	13.87	13.29	12.69	14.02	9.96	8.46
Douglas fir	10.78	10.59	11.58	11.05	13.09	12.44	14.12	9.51	8.67
White pine	19.16	17.44	19.13	18.54	18.93	18.16	19.41	14.93	12.69
Hemlock	15.35	13.14	13.68	13.59	13.85	13.95	15.53	11.91	9.98
Spruce	17.58	16.58	17.02	16.14	16.62	16.91	17.26	14.03	11.27
Western yellow pine	14.52	14.32	13.62	13.62	14.26	15.39	15.67	11.30	9.70
Cypress	20.85	19.85	20.09	20.54	20.51	20.46	22.12	17.50	13.32
Redwood	13.93	13.54	14.13	13.99	15.52	14.80	17.70	12.83	10.12
Cedar	15.24	16.10	[2] 14.45	13.86	15.53	19.95	19.14	14.35	10.91
Larch (tamarack)	12.49	10.78	[3] 11.96	11.87	12.33	12.68	13.99	11.39	8.73
White fir	12.25	10.94	9.86	10.64	11.52	13.10	15.45	(4)	(4)
Sugar pine	16.77	17.40	(4)	17.52	18.68	18.14	19.84	(4)	12.30
Balsam fir	16.49	13.79	(4)	13.42	14.48	13.99	16.16	(4)	(4)
Lodgepole pine	15.13	13.57	(4)	12.41	14.88	16.25	(4)	(4)	(4)
Hardwoods:									
Oak	20.06	18.73	19.63	19.14	18.76	20.50	21.23	17.51	13.78
Maple	18.24	15.21	15.56	15.49	16.16	15.77	16.84	14.94	11.83
Red gum	14.64	12.54	12.60	12.11	12.26	13.20	14.10	10.87	9.63
Chestnut	17.05	16.17	16.62	16.63	16.23	16.12	17.04	13.78	13.37
Yellow poplar	21.89	22.45	24.06	25.46	24.71	25.39	24.91	18.99	14.03
Birch	19.59	16.52	17.43	16.61	17.37	16.95	17.37	15.44	12.50
Beech	16.20	14.01	13.51	14.09	14.34	13.25	14.30	(4)	(4)
Basswood	21.05	18.89	19.26	19.20	20.94	19.50	20.03	16.86	12.84
Elm	19.46	16.98	16.87	17.13	18.67	17.52	18.45	14.45	11.4
Ash	23.85	22.15	20.27	21.21	22.47	24.44	25.01	18.77	15.84
Cottonwood	17.42	17.36	[5] 20.44	18.12	17.78	18.05	18.42	14.92	10.37
Tupelo	13.00	12.25	13.61	12.46	12.14	11.87	14.48	(4)	(4)
Hickory	23.84	23.35	23.29	22.47	26.55	30.80	29.50	23.94	18.78
Walnut	42.38	48.47	(4)	31.70	34.91	42.79	43.31	45.64	36.49
Sycamore	14.65	13.86	(4)	13.16	14.10	14.77	14.58	(4)	11.04

[1] 1912 values based on limited number of reports.

[2] Western red cedar only.

[3] Western larch only.

[4] Data not obtained.

[5] Southern cottonwood only.

DETAILED SUMMARY.

In Table 40 is summarized the data presented in the individual species tables, showing, by States, the number of active sawmills reporting and their cut of each wood, and in addition the production of lath and shingles.

TABLE 40.—*Active sawmills (cutting 50,000 feet and over) reporting, and reported production of each kind of lumber and lath and shingles, by States, 1916.*

	Number of active mills reporting.	Aggregate.	Total.	Softwoods.	
				Yellow pine.	Douglas fir.
		Feet b. m.	*Feet b. m.*	*Feet b. m.*	*Feet b. m.*
United States	17,269	34,791,385,000	28,576,292,000	13,411,411,000	5,413,431,000
Alabama	744	1,310,653,000	1,185,323,000	1,180,318,000	
Arizona	17	92,872,000	92,872,000		634,000
Arkansas	706	1,668,493,000	1,112,440,000	1,075,973,000	
California and Nevada	182	1,413,541,000	1,411,989,000		141,200,000
Colorado	96	67,368,000	67,221,000		5,596,000
Connecticut	145	60,163,000	13,995,000	545,000	
Delaware	34	9,356,000	7,163,000	7,065,000	
Florida	225	1,179,717,000	1,165,518,000	976,516,000	
Georgia	710	753,930,000	677,724,000	621,419,000	
Idaho	190	846,107,000	844,660,000		80,632,000
Illinois	114	43,731,000	2,036,000	150,000	
Indiana	471	209,354,000	108,000	52,000	
Iowa	61	18,027,000	55,000	50,000	
Kansas	5	534,000			
Kentucky	597	374,074,000	35,900,000	12,633,000	
Louisiana	329	3,910,866,000	3,590,893,000	3,063,468,000	
Maine	606	866,749,000	817,590,000	8,251,000	
Maryland	213	68,988,000	31,663,000	28,786,000	
Massachusetts	260	176,268,000	138,864,000	5,202,000	
Michigan	341	1,019,183,000	430,304,000		
Minnesota	211	1,063,046,000	1,025,525,000		
Mississippi	627	2,353,891,000	1,980,702,000	1,963,285,000	
Missouri	389	219,244,000	52,705,000	26,851,000	
Montana	103	383,884,000	383,818,000		56,845,000
New Hampshire	305	336,064,000	297,078,000	9,659,000	
New Jersey	109	30,925,000	10,618,000	8,650,000	
New Mexico	55	80,406,000	80,406,000		7,382,000
New York	1,260	349,908,000	172,932,000		
North Carolina	1,532	1,657,032,000	1,386,521,000	1,232,849,000	
Ohio	546	219,042,000	1,210,000	135,000	
Oklahoma	91	232,198,000	208,252,000	207,501,000	
Oregon	525	2,221,854,000	2,216,769,000		1,572,469,000
Pennsylvania	934	565,895,000	287,677,000	11,642,000	
Rhode Island	19	17,827,000	8,512,000		
South Carolina	443	746,301,000	688,517,000	643,586,000	
South Dakota	27	26,450,000	25,466,000		
Tennessee	768	488,242,000	88,572,000	42,697,000	
Texas	301	1,723,826,000	1,651,232,000	1,649,334,000	
Utah	76	9,383,000	9,097,000		957,000
Vermont	335	180,234,000	114,738,000	40,000	
Virginia	1,210	1,036,209,000	704,429,000	632,649,000	
Washington	444	4,492,997,000	4,491,591,000		3,546,532,000
West Virginia	475	1,009,156,000	287,247,000	2,105,000	
Wisconsin	386	1,240,778,000	759,753,000		
Wyoming	52	16,619,000	16,606,000		1,184,000

TABLE 40.—*Active sawmills (cutting 50,000 feet and over) reporting, and reported production of each kind of lumber and lath and shingles, by States, 1916*—Continued.

	Softwoods—Continued.					
	White pine.	Hemlock.	Western yellow pine.	Spruce.	Cypress.	Redwood.
	Feet b. m.	*Feet b. m.*	*Feet b. m.*	*Feet b. m.*	*Feet b. m.*	*Feet b. m.*
United States	2,330,831,000	1,986,653,000	1,684,987,000	1,129,750,000	945,330,000	490,828,000
Alabama		25,000			4,562,000	
Arizona			92,133,000	80,000		
Arkansas					36,347,000	
California and Nevada		3,151,000	494,973,000	13,871,000		490,828,000
Colorado		60,000	27,848,000	18,614,000		
Connecticut	10,283,000	3,039,000		10,000		
Delaware					65,000	
Florida					188,799,000	
Georgia	1,450,000	540,000			54,305,000	
Idaho	304,055,000	27,000	240,160,000	13,537,000		
Illinois					1,886,000	
Indiana	6,000					
Iowa	5,000					
Kansas						
Kentucky	6,363,000	15,649,000		15,000	286,000	
Louisiana					527,425,000	
Maine	272,035,000	96,300,000		376,820,000		
Maryland	1,861,000	820,000			163,000	
Massachusetts	101,567,000	15,770,000		14,638,000		
Michigan	64,040,000	324,720,000		8,234,000		
Minnesota	962,765,000	2,125,000		25,357,000		
Mississippi					17,417,000	
Missouri					25,555,000	
Montana	10,497,000		138,206,000	6,790,000		
New Hampshire	184,728,000	43,165,000		54,337,000		
New Jersey		27,000			12,000	
New Mexico			72,004,000	1,020,000		
New York	50,145,000	79,880,000		41,551,000		
North Carolina	32,833,000	42,916,000		45,540,000	25,500,000	
Ohio	502,000	552,000				
Oklahoma					750,000	
Oregon	86,000	70,014,000	399,102,000	96,245,000		
Pennsylvania	31,732,000	243,810,000		457,000		
Rhode Island	7,965,000	545,000				
South Carolina					44,810,000	
South Dakota			25,466,000			
Tennessee	6,966,000	25,977,000		11,000	6,133,000	
Texas					1,852,000	
Utah			4,164,000	2,554,000		
Vermont	13,924,000	25,257,000		66,842,000		
Virginia	3,514,000	35,952,000		1,596,000	9,463,000	
Washington	64,128,000	267,313,000	188,215,000	221,295,000		
West Virginia	11,619,000	161,554,000		111,965,000		
Wisconsin	187,447,000	527,465,000		5,474,000		
Wyoming	315,000		2,716,000	2,897,000		

TABLE 40.—*Active sawmills (cutting 50,000 feet and over) reporting, and reported production of each kind of lumber and lath and shingles, by States, 1916*—Continued.

	Softwoods—Continued.					
	Cedar.	Larch.	White fir.	Sugar pine.	Balsam fir.	Lodgepole pine.
	Feet b. m.	*Feet b. m.*	*Feet b. m.*	*Feet b. m.*	*Feet b. m.*	*Feet b. m.*
United States	322,003,000	376,731,000	189,699,000	169,247,000	97,165,000	28,226,000
Alabama	418,000					
Arizona			25,000			
Arkansas	120,000					
California and Nevada	16,587,000		85,918,000	165,461,000		
Colorado			637,000			14,466,000
Connecticut	118,000					
Delaware	33,000					
Florida	203,000					
Georgia	10,000					
Idaho	35,981,000	107,827,000	60,344,000			2,097,000
Illinois						
Indiana	49,000	1,000				
Iowa						
Kansas						
Kentucky	954,000					
Louisiana						
Maine	9,582,000	821,000			53,781,000	
Maryland	33,000					
Massachusetts	290,000	104,000			1,293,000	
Michigan	6,369,000	16,568,000			10,373,000	
Minnesota	3,401,000	15,557,000			16,320,000	
Mississippi						
Missouri	300,000					
Montana	2,612,000	163,829,000	3,408,000			1,631,000
New Hampshire	300,000	35,000			4,854,000	
New Jersey	1,929,000					
New Mexico						
New York	463,000	172,000			721,000	
North Carolina	6,883,000					
Ohio	20,000	1,000				
Oklahoma	1,000					
Oregon	46,138,000	8,478,000	20,451,000	3,786,000		
Pennsylvania	3,000	33,000				
Rhode Island	2,000					
South Carolina	121,000					
South Dakota						
Tennessee	6,675,000	83,000			30,000	
Texas	46,000					
Utah			504,000			918,000
Vermont	552,000	81,000			8,042,000	
Virginia	21,230,000				25,000	
Washington	155,532,000	30,534,000	18,042,000			
West Virginia	4,000					
Wisconsin	5,034,000	32,607,000			1,726,000	
Wyoming	10,000		370,000			9,114,000

TABLE 40.—*Active sawmills (cutting 50,000 feet and over) reporting and reported production of each kind of lumber and lath and shingles, by States, 1916*—Continued.

	Hardwoods.					
	Total.	Oak.	Maple.	Yellow poplar.	Red gum.	Chestnut.
	Feet b. m.	*Feet b. m.*	*Feet b. m.*	*Feet b. m.*	*Feet b. m.*	*Feet b. m.*
United States........	6,215,093,000	2,164,633,000	809,341,000	394,854,000	651,879,000	419,581,000
Alabama..................	125,330,000	41,881,000	287,000	27,265,000	22,813,000	218,000
Arizona..................	....	....	....	....	....	....
Arkansas..................	556,053,000	246,264,000	6,092,000	784,000	207,148,000	....
California and Nevada....	1,552,000	30,000	35,000	....	....	....
Colorado..................	147,000	....	....	....	....	....
Connecticut..................	46,168,000	11,097,000	846,000	617,000	....	30,722,000
Delaware..................	2,193,000	1,268,000	12,000	101,000	495,000	83,000
Florida..................	14,199,000	895,000	1,000	804,000	7,070,000	....
Georgia..................	76,206,000	24,006,000	401,000	28,569,000	12,306,000	1,455,000
Idaho..................	1,447,000	....	....	....	....	....
Illinois..................	41,695,000	20,972,000	1,322,000	542,000	3,539,000	1,000
Indiana..................	209,246,000	83,674,000	19,730,000	6,690,000	4,014,000	395,000
Iowa..................	17,972,000	3,702,000	789,000	....	....	....
Kansas..................	534,000	241,000	3,000	....	....	....
Kentucky..................	338,174,000	212,768,000	6,192,000	40,544,000	9,851,000	17,416,000
Louisiana..................	319,973,000	71,968,000	19,000	511,000	75,926,000	....
Maine..................	49,159,000	6,666,000	6,094,000	....	....	540,000
Maryland..................	37,325,000	16,860,000	3,548,000	1,060,000	2,399,000	9,572,000
Massachusetts..................	37,404,000	6,692,000	1,949,000	152,000	....	23,135,000
Michigan..................	588,879,000	7,320,000	365,456,000	304,000	....	85,000
Minnesota..................	37,521,000	6,392,000	216,000	....	....	....
Mississippi..................	373,189,000	129,131,000	931,000	10,841,000	164,949,000	....
Missouri..................	166,538,000	95,850,000	6,352,000	254,000	21,951,000	....
Montana..................	66,000	....	....	....	....	....
New Hampshire..................	38,986,000	10,818,000	6,057,000	63,000	....	4,392,000
New Jersey..................	20,307,000	9,273,000	434,000	225,000	417,000	8,704,000
New Mexico..................	....	....	....	....	....	....
New York..................	176,976,000	23,926,000	50,551,000	26,000	32,000	15,540,000
North Carolina..................	270,511,000	129,124,000	6,564,000	37,272,000	23,647,000	46,497,000
Ohio..................	217,832,000	102,405,000	25,733,000	18,494,000	2,017,000	6,663,000
Oklahoma..................	23,946,000	14,226,000	52,000	....	5,710,000	....
Oregon..................	5,085,000	417,000	1,862,000	....	....	....
Pennsylvania..................	278,218,000	113,780,000	43,422,000	6,193,000	868,000	51,146,000
Rhode Island..................	9,315,000	2,445,000	125,000	65,000	....	6,460,000
South Carolina..................	57,784,000	7,664,000	1,627,000	16,350,000	20,297,000	....
South Dakota..................	984,000	2,000	....	....	....	....
Tennessee..................	399,670,000	225,645,000	6,451,000	47,591,000	23,917,000	26,844,000
Texas..................	72,594,000	39,114,000	38,000	....	23,592,000	....
Utah..................	286,000	....	....	....	....	....
Vermont..................	65,496,000	2,842,000	18,465,000	....	....	251,000
Virginia..................	331,780,000	184,226,000	10,090,000	47,022,000	16,008,000	37,270,000
Washington..................	1,406,000	82,000	215,000	....	....	....
West Virginia..................	721,909,000	298,189,000	70,900,000	102,515,000	2,913,000	132,192,000
Wisconsin..................	481,025,000	12,768,000	146,480,000	....	....	....
Wyoming..................	13,000	10,000	....	....	....	....

Table 40.—*Active sawmills (cutting 50,000 feet and over) reporting, and reported production of each kind of lumber and lath and shingles, by States, 1916*—Continued.

	Hardwoods—Continued.						
	Beech.	Birch.	Basswood.	Cottonwood.	Elm.	Ash.	Hickory.
	Feet b. m.	*Feet b. m.*	*Feet b. m.*	*Feet b. m.*	*Feet b. m.*	*Feet b. m.*	*Feet b. m.*
United States..	283,363,000	365,943,000	209,275,000	134,980,000	195,266,000	156,204,000	93,454,000
Alabama..........	1,133,000	8,000	183,000	4,095,000	505,000	2,268,000	2,021,000
Arizona..........	....	....	....	....	....	....	....
Arkansas..........	45,000	1,000	383,000	27,524,000	17,948,000	23,117,000	3,311,000
California and Nevada..........	....	....	....	27,000	....	....	....
Colorado..........	....	....	....	147,000	....	....	....
Connecticut.......	343,000	595,000	136,000	100,000	104,000	746,000	825,000
Delaware..........	....	200,000	....	....	....	....	14,000
Florida............	11,000	2,000	....	1,586,000	11,000	1,765,000	917,000
Georgia............	246,000	74,000	285,000	1,077,000	344,000	4,315,000	712,000
Idaho..............	....	....	....	1,447,000	....	....	....
Illinois............	589,000	35,000	106,000	976,000	2,118,000	1,684,000	1,058,000
Indiana...........	37,082,000	223,000	4,828,000	1,315,000	19,039,000	8,190,000	7,639,000
Iowa...............	5,000	147,000	1,393,000	2,566,000	2,256,000	267,000	241,000
Kansas............	....	....	15,000	120,000	73,000	5,000	35,000
Kentucky..........	17,170,000	498,000	4,833,000	675,000	1,186,000	3,860,000	9,788,000
Louisiana.........	485,000	....	33,000	18,405,000	3,516,000	16,175,000	4,370,000
Maine..............	2,837,000	28,088,000	1,517,000	1,204,000	357,000	1,853,000	....
Maryland.........	399,000	497,000	896,000	42,000	79,000	389,000	956,000
Massachusetts.....	1,346,000	2,498,000	316,000	180,000	58,000	822,000	109,000
Michigan..........	66,316,000	59,251,000	36,756,000	2,834,000	42,479,000	7,273,000	380,000
Minnesota.........	11,000	8,341,000	5,985,000	11,863,000	3,329,000	1,375,000	1,000
Mississippi........	134,000	....	50,000	35,398,000	7,161,000	8,524,000	6,700,000
Missouri...........	33,000	91,000	246,000	5,331,000	9,836,000	2,223,000	4,063,000
Montana..........	....	....	....	66,000	....	....	....
New Hampshire...	5,153,000	10,376,000	730,000	284,000	77,000	1,021,000	6,000
New Jersey........	99,000	38,000	14,000	52,000	280,000	208,000	455,000
New Mexico.......	....	....	....	....	....	....	....
New York..........	30,350,000	23,192,000	14,630,000	1,193,000	8,353,000	7,359,000	923,000
North Carolina....	1,280,000	2,416,000	7,028,000	519,000	220,000	3,270,000	2,447,000
Ohio...............	22,777,000	570,000	5,049,000	764,000	10,681,000	7,476,000	6,575,000
Oklahoma.........	....	....	30,000	2,006,000	438,000	576,000	253,000
Oregon............	....	....	....	1,215,000	....	1,496,000	....
Pennsylvania.....	38,712,000	7,839,000	4,194,000	328,000	1,261,000	4,064,000	3,310,000
Rhode Island.....	50,000	70,000	....	....	....	50,000	30,000
South Carolina....	....	....	....	199,000	478,000	3,350,000	110,000
South Dakota.....	....	....	....	982,000	....	....	....
Tennessee.........	7,411,000	1,189,000	5,107,000	3,699,000	8,230,000	12,020,000	12,013,000
Texas..............	77,000	3,000	61,000	996,000	721,000	4,950,000	2,063,000
Utah...............	....	....	....	286,000	....	....	....
Vermont..........	9,345,000	22,980,000	5,868,000	1,386,000	966,000	3,312,000	10,000
Virginia...........	2,591,000	582,000	7,030,000	374,000	76,000	790,000	2,144,000
Washington.......	....	....	....	929,000	....	80,000	....
West Virginia.....	35,634,000	16,590,000	28,955,000	618,000	1,130,000	7,710,000	9,909,000
Wisconsin.........	1,699,000	179,549,000	72,618,000	2,169,000	51,946,000	13,621,000	66,000
Wyoming..........	....	....	....	3,000	....	....	....

TABLE 40.—*Active sawmills (cutting 50,000 feet and over) reporting, and reported production of each kind of lumber and lath and shingles, by States, 1916*—Continued.

	Hardwoods—Continued.				Lath.		Shingles.	
	Tupelo.	Walnut.	Sycamore.	Minor species.	Number of active mills reporting.	Quantity.	Number of active mills reporting.	Quantity.
	Feet b. m.	*Feet b. m.*	*Feet b. m.*	*Feet b. m.*		*Feet b. m.*		*Feet b. m.*
United States..	214,239,000	61,167,000	28,035,000	32,879,000	1,770	3,163,029,000	1,932	9,477,077,000
Alabama	22,416,000	51,000	90,000	96,000	39	64,922,000	113	183,662,000
Arizona					6	24,918,000		
Arkansas	5,497,000	205,000	7,231,000	503,000	30	78,157,000	42	45,411,000
California and Nevada				1,460,000	19	30,713,000	52	348,622,000
Colorado					5	5,964,000	3	172,000
Connecticut	9,000	19,000	5,000	4,000	5	12,805,000	5	202,000
Delaware	20,000				1	30,000	3	89,000
Florida	1,137,000				28	85,187,000	51	131,795,000
Georgia	1,850,000	100,000	355,000	111,000	46	49,316,000	148	131,763,000
Idaho					24	117,365,000	9	79,960,000
Illinois	4,272,000	3,169,000	1,297,000	15,000	4	1,045,000		
Indiana	1,470,000	10,691,000	3,958,000	308,000	15	825,000	4	162,000
Iowa		6,497,000	91,000	8,000	1	500,000		
Kansas		27,000	15,000					
Kentucky	3,175,000	8,138,000	1,933,000	147,000	32	9,340,000	20	4,672,000
Louisiana	113,115,000	1,000	374,000	15,075,000	69	354,551,000	53	404,263,000
Maine		3,000			139	396,935,000	200	221,039,000
Maryland	144,000	101,000	383,000		25	5,774,000	19	1,601,000
Massachusetts		69,000		78,000	17	2,036,000	18	865,000
Michigan		175,000	135,000	115,000	80	335,846,000	69	201,171,000
Minnesota		8,000			53	267,788,000	12	6,577,000
Mississippi	8,216,000	64,000	499,000	591,000	30	162,689,000	29	25,196,000
Missouri	6,329,000	12,140,000	1,789,000	50,000	8	1,332,000	7	998,000
Montana					12	25,522,000	3	16,266,000
New Hampshire		2,000		7,000	19	18,398,000	37	3,543,000
New Jersey	64,000	40,000	4,000		32	5,808,000	32	17,876,000
New Mexico					5	10,851,000	1	320,000
New York	20,000	34,000	77,000	770,000	121	12,829,000	111	9,577,000
North Carolina	8,338,000	567,000	413,000	909,000	111	86,551,000	135	123,959,000
Ohio	647,000	6,026,000	1,827,000	128,000	39	6,976,000	2	125,000
Oklahoma		189,000	466,000		3	19,711,000	4	220,000
Oregon				95,000	46	142,352,000	50	471,762,000
Pennsylvania	581,000	423,000	212,000	1,885,000	187	63,016,000	105	8,652,000
Rhode Island		20,000					1	125,000
South Carolina	7,363,000	19,000	282,000	45,000	41	44,967,000	48	24,382,000
South Dakota					7	7,055,000	5	334,000
Tennessee	6,083,000	8,658,000	3,680,000	1,132,000	48	13,795,000	54	9,176,000
Texas	316,000	39,000	33,000	591,000	20	42,686,000	42	32,749,000
Utah					13	979,000	3	392,000
Vermont		60,000		11,000	25	9,990,000	52	7,993,000
Virginia	21,235,000	1,334,000	526,000	482,000	94	63,263,000	61	43,387,000
Washington				100,000	64	264,690,000	238	6,739,388,000
West Virginia	1,942,000	2,253,000	2,360,000	8,099,000	80	96,665,000	13	2,800,000
Wisconsin		45,000		64,000	121	218,598,000	73	175,455,000
Wyoming					6	289,000	5	376,000

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